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MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

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MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

CONTENTS.—Introductory notes.—Publications of associations.—Bureau of Education: Recent publications.—Current educational conditions.—Pedagogics and didactics.—Educational psychology, Child study.—Special methods of instruction.—Special subjects of curriculum.—Kindergarten and primary school.—Rural education.—Secondary education.—Teachers: Training and professional status.—Higher education.—School administration.—School management.—School sanitation and hygiene.—Sex hygiene.—Physical training.—Social aspects of education.—Child welfare.—Moral and religious education.—Manual and vocational training.—Technical education.—Agricultural education.—Home economics.—Medical education.—Education of women.—Education of special classes.—Exceptional children.—Libraries and reading.—Periodicals indexed in this number.

INTRODUCTORY NOTES.

The last preceding issue of this record was dated June, 1913. Its publication is now resumed after an intermission of two months.

A selection follows of representative books and articles listed in the present bulletin, with full entry for each denoted by item number preceding the respective title:

(1081) Bascom, Things learned by living; (1084) Holmes, Tragedy of education; (1092) Snedden, Problems of educational readjustment; (1093) Vives, De tradendis disciplinis, translated by Foster Watson, with full introduction; (1100) Montessori, Pedagogical anthropology; (1103) Thorndike, Educational psychology, volume 1; (1133) Curtis, Rural social center; (1145) Gray, Public schools and the Empire; (1158) Bryce, University and historical addresses; (1181) McMurry, Elementary school standards; (1190) Burks, Health and the school; (1209) Key, Education for motherhood; (1210) King, Education for social efficiency; (1226) Sneath and Hodges, Moral training; (1237) Leake, Industrial education.

Of the publications listed in this bulletin, only those named in the section headed "Bureau of Education: Recent publications" are available for free distribution by this office. All others may ordinarily be obtained from their respective publishers, either directly or through a dealer, or in the case of an association publication, from the secretary of the issuing organization.

Books, pamphlets, etc., intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

PUBLICATIONS OF ASSOCIATIONS.

1022. **Alabama educational association.** Official proceedings of the thirty-second annual convention, held at Montgomery, March 20, 21, and 22, 1913. Montgomery, Ala., The Paragon press [1913]. (W. C. Griggs, secretary, Birmingham, Ala.)

Contains: 1. J. G. Eggleston: The function of public education, p. 67-76. 2. J. B. Game: Standard college degrees and normal-school diplomas as a basis for the certification of teachers, p. 76-84. 3. A. C. Young: How can manual training be made profitable to a school with small equipment? p. 145-48.

1023. **American institute of instruction.** Eighty-second annual meeting, Bethlehem, N. H., July 1-4, 1913. Journal of education, 78: 61-69, 73-78, July 17, 1913.

Contains: 1. David Snedden: Increasing the efficiency of education, p. 62-63. 2. H. C. Morrison: Professional cooperation, p. 64-65. 3. A. D. Yocum: Mechanical drill as a means to intellectual freedom, p. 65-66. 4. Lillian B. Sage: Who has a better chance? p. 66-68. 5. W. E. Mason: Industrial and vocational education, p. 68-69. 6. Florence E. Leadbetter: An introduction to a trade school, p. 69, 74. 7. Lotta A. Clark: Social education in the high school, p. 73. 8. O. A. Morton: The value of agricultural club work in New England, p. 74-76. 9. William Orr: New college entrance requirements, p. 76-77.

1024. **Association of American agricultural colleges and experiment stations.** Proceedings of the twenty-sixth annual convention, held at Atlanta, Ga., November 13-15, 1912. Burlington, Vt., Free press printing company, 1913. 228 p. 8°. (J. L. Hills, secretary, Burlington, Vt.)

Contains: 1. A. C. True: Report of the Committee on instruction in agriculture, p. 19-42. 2. W. O. Thompson: Report of the Committee on graduate study, p. 43-49. 3. W. E. Winthrop: President's address [History of the Morrill Act and land-grant colleges], p. 51-60. 4. A. M. Soule: Report of the Committee on extension work, p. 60-67. 5. W. O. Thompson: The influence of the Morrill act upon American higher education, p. 87-94. 6. F. B. Jenks: Agricultural courses in the land-grant colleges, p. 108-11. 7. M. F. Miller: The proper correlation of scientific and practice work in agricultural college curricula, p. 112-18. 8. F. B. Mumford: Cooperation in extension work between the United States Department of agriculture and the colleges of agriculture, p. 135-38. 9. R. L. Slagle: The development of the college and station news service, p. 150-54. 10. E. Davenport: The American agricultural college, p. 156-66. 11. E. A. Burnett: Shall practical experience be required before granting the bachelor's degree in agriculture? p. 172-75. 12. W. D. Hurd: The training of men for extension work, p. 204-10. 13. C. R. Titlow: Special trains as a means of extension teaching, p. 215-17.

1025. **Association of American universities.** Journal of proceedings and addresses of the fourteenth annual conference, held at the University of Pennsylvania, November 7 and 8, 1912. Chicago, Ill., University of Chicago press [1913?]. 42 p. 8°.

Contains: 1. F. J. E. Woodbridge: The present status of the degree of doctor of philosophy in American universities, p. 19-23. 2. A. R. Hill: The influence of graduate fellowships and scholarships upon the quality of graduate study, p. 24-34. 3. A. T. Hadley: Methods of ascertaining and apportioning cost of instruction in universities, p. 35-42.

1026. **Association of colleges and preparatory schools of the middle states and Maryland.** Proceedings of the twenty-sixth annual convention . . . 1912. Held under the auspices of University of Pennsylvania, Philadelphia, November 29 and 30, 1912. Published by the Association, 1913. 126 p. 8°. (G. W. McClelland, secretary, Philadelphia, Pa.)

Contains: 1. A. L. Lowell: The value of the general examination in college education, p. 13-18. 2. E. J. Goodwin: Comprehensive examinations for high-school graduation and for admission to college, p. 19-27; Discussion, p. 28-54. 3. J. E. Russell: Professional factors in the training of the high-school teacher, p. 55-71. 4. C. N. Kendall: The training of high-school teachers, p. 72-82; Discussion, p. 83-97. 5. W. H. Maxwell: The attitude of the American parent toward education, p. 98-112.

1027. **Bureau international de fédérations d'instituteurs.** Annuaire 1913-1914. Huitième session annuelle, Bruxelles 1913. Rapports prépara-

toires. [Bruxelles, Imp. Rossignol & van den Bril, 1913.] 155 p. 16°. (Charles Rossignol, president, 44 Rue du Houblon, Brussels, Belgium.)

Contains: 1. C. Rossignol: *La méthode de pédagogie scientifique du Dr. Maria Montessori*, p. 41-82. 2. M. Skarvig: *Des projections lumineuses dans l'enseignement*, p. 91-101. 3. Adolf Obst and P. Cnudde: *Excursions scolaires et voyages des instituteurs*, p. 114-29.

1028. **Conference for education in the South.** Proceedings, Richmond, Va., April 15-18, 1913. Washington, D. C., Executive committee [1913]. 325 p. 8°.

Contains: 1. H. L. Whitfield: The present-day common school is inadequate for the training of women to meet present-day rural problems, p. 67-68. 2. Leila A. Russell: The country school as it is and the tragic consequence for the woman on the farm, p. 69-72. 3. Hetty S. Browne: Reorganization of the country school, p. 74-77. 4. Susie V. Powell: How can the girls' industrial club work be made a part of the rural-school work? p. 78-81. 5. J. P. McConnell: The relation of the high schools and colleges to the improvement of rural life, p. 83-85. 6. B. R. Andrews: Home economics and help for the home maker, p. 87-92. 7. T. S. Settle: Community cooperation, the country school and the country church, p. 106-109. 8. L. C. Brogden: Consolidation—an effective means for making rural schools grow, p. 200-206. 9. E. E. Rall: The certification of teachers in the Southern states, p. 221-26. 10. J. E. Swearingen: The need for effective rural schools, and how these schools may be developed, p. 263-65. 11. J. S. Thomas: High-school progress in Alabama, p. 271-74.

1029. **Conference on the education of backward, truant, delinquent and dependent children.** Proceedings . . . Cleveland, Ohio, June 10-12, 1912. Morganza, Pa., Printing class of the Pennsylvania training school. 175 p. 8°. (Elmer L. Coffeen, secretary, Westboro, Mass.)

Contains: 1. L. B. Bernstein: An institutional school curriculum, p. 21-31; Discussion, p. 31-35. 2. A. D. Dean: Institutional vocational training, p. 59-69; Discussion, p. 69-71.

1030. **Georgia educational association.** Proceedings and addresses of the forty-seventh annual meeting, Atlanta, Ga., May 1-3, 1913. La Grange, Ga., Billingham-Randall printing co. [1913]. 82 p. 8°. (C. L. Smith, secretary, La Grange, Ga.)

Contains: 1. F. H. Gaines: Present trend in higher education of women, p. 22-25. 2. Ralph Newton: Relating high-school course to life, p. 26-30. 3. J. C. Harris: Use of departmental plan in grammar schools, p. 31-34. 4. E. H. McMichael: How the bookman can help the schools, p. 35-42. 5. J. F. Thomason: Professional training of high-school teachers, p. 45-49. 6. Mary E. Creswell: Teaching of home making in the country schools, p. 50-54. 7. T. F. Abercrombie: Georgia's duty to her children in the way of medical inspection, p. 54-57. 8. I. S. Smith: What normal can do for rural schools, p. 63-67. 9. G. D. Godard: How shall boys be kept in high schools till graduation? p. 70-73.

1031. **Iowa state teachers' association.** Proceedings of the fifty-eighth annual session . . . held at Des Moines, Iowa, November 7, 8 and 9, 1912. 317 p. 8°. (O. E. Smith, secretary, Indianola, Iowa.)

Contains: 1. Alice Dille: The need for more and better facilities for training teachers, p. 33-37. 2. A. M. Deyoe: Factors in the development of a greater Iowa, p. 37-53. 3. Report of the Better Iowa schools commission, p. 55-118. 4. Irving King: Social function and development of the high school, p. 119-23. 5. Ross Masters: The correlation of the cultural and vocational elements in the curriculum, p. 130-37. 6. Charlene Sperry: College fraternities or sororities—their value and regulation, p. 137-42. 7. Herbert Martin: The mission of the Christian college, p. 142-45. 8. Dean Davenport: Shall our public high schools expand? p. 146-52. 9. J. E. Stout: Standardization of the small high school, p. 153-57. 10. J. L. Meade: The sphere of the high-school principal, p. 176-78. 11. J. H. Harris: The psychology of play, p. 178-84. 12. Alma L. Binzel: How the kindergarten prepares for primary reading, p. 186-99. 13. O. H. Benson: An education for farm and home life, p. 199-206. 14. Edna B. Pitman: School inspection, p. 209-14. 15. Louise H. Campbell: Home economics in rural schools, p. 228-33.

1032. **Mississippi teachers' association.** Proceedings of twenty-eighth annual meeting, Hattiesburg, Miss., May 1, 2, 3, 1913. Jackson, Miss., Tucker printing house [1913]. (H. L. McCleskey, secretary, Hazlehurst, Miss.)

Contains: 1. W. H. Smith: President's address, p. 25-35. 2. H. L. Whitfield: A discussion of the high school situation of the South, p. 45-57. 3. W. S. Leathers: Medical inspection of schools, p. 80-84. 4. O. G. Brim: What influences shall determine what sciences shall be taught anywhere? p. 87-92.

1033. **Missouri state teachers' association.** Official proceedings and addresses of the fifty-first annual meeting . . . held at Springfield, Missouri, November 14, 15, 16, 1912. Cape Girardeau, Daily Republican, printers, 1913. 293 p. 8°. (E. M. Carter, secretary, Cape Girardeau, Mo.)

Contains: 1. E. T. Fairchild: Normal training in high schools, p. 24-32. 2. V. C. Coulter: Recent progress in the teaching of English, p. 32-38. 3. E. T. Fairchild: A plea for equal educational opportunity, p. 38-46. 4. P. P. Claxton: Some fundamental relations in education, and how to secure them, p. 52-60. 5. P. P. Claxton: Literature in the schools, p. 68-81. 6. L. B. Evans: Some problems of the near future, p. 81-90. 7. P. P. Claxton: Education and material wealth, p. 96-109. 8. P. P. Claxton: The teacher makes the school, p. 109-18. 9. W. N. Beethan: The Ohio school improvement federation, p. 119-26. 10. B. F. Melcher: Vocational guidance—a function of the high school, p. 212-14.

1034. **National collegiate athletic association.** Proceedings of the seventh annual convention held at New York city, New York, December 27, 1912. (Frank W. Nicolson, secretary-treasurer, Middletown, Conn.)

Contains: 1. W. L. Dudley: The proper control of athletics, p. 38-45. 2. G. L. Meylan: Athletic training, p. 45-58.

1035. **National conference on vocational guidance.** Proceedings of the second conference, New York, October 23 to 26, 1912. New York, Pub. by the secretary, 1913. (B. C. Gruenberg, secretary, Brooklyn, N. Y.)

Contains: 1. Mrs. P. J. O'Connell: The placing of the unskilled girl, p. 2-9. 2. E. W. Weaver: Getting in touch with the employer, p. 9-14. 3. Helen T. Woolley: The legal registration of certificates as an aid to follow-up work, p. 27-30. 4. C. R. Richards: What we need to know about occupations, p. 35-44. 5. J. A. Fitch: A method for industrial surveys, p. 44-53. 6. Mrs. Mary S. Woolman: Investigations, the need and value, p. 53-56. 7. Leo Arnstein: Child labor scholarships of New York city, p. 59-66. 8. M. Edith Campbell: Private scholarship funds, p. 67-73. 9. Pauline Goldmark: Some school and vocational scholarships in New York city, p. 74-78. 10. Helen T. Woolley: The psychological laboratory as an adjunct to a vocational bureau, p. 84-88. 11. J. E. Lough: Experimental psychology in vocational guidance, p. 89-96. 12. Mrs. B. B. Glenney: Opportunities for vocational training in Boston, p. 107-21. 13. A. D. Dean: The place of vocational guidance in the vocational education movement, p. 122-28. 14. J. B. Davis: Vocational guidance through school work, p. 137-43. 15. J. F. Crowell: What business expects of the schools, p. 167-73.

1036. **National education association.** Synopsis of the meeting held at Salt Lake City, July 5-11, 1913. Journal of education, 78: 87-95, 100-105, 117-23, July 24, August 14, 1913. (D. W. Springer, secretary, Ann Arbor, Mich.)

Gives a number of the addresses in brief.

1037. **National society for the promotion of industrial education.** Proceedings sixth annual meeting, Philadelphia, December 5-7, 1912. Ed. by William T. Bawden. Peoria, Ill., Manual arts press [1913]. 309 p. 8°. (Charles A. Prosser, secretary, New York, N. Y.)

Contains: 1. Legislation for vocational education in Pennsylvania, p. 5-38. 2. The training of teachers for vocational education, 41-110. 3. Federal aid for vocational education, p. 113-36. 4. How to secure good laws and good schools in vocational education, p. 139-80. 5. Some debatable issues in vocational education, p. 183-234. 6. The duty of society to the next generation, p. 237-52. 7. Team play between the schoolmaster and the layman, p. 255-98.

1038. **New England high school commercial teachers association.** Report of the tenth annual convention held at State normal school, Salem, Mass., October 19, 1912. (W. O. Holden, secretary, Pawtucket, R. I.)

Contains: 1. David Snedden: Some problems relative to the scope and function of commercial courses in high schools, p. 5-10. 2. J. P. Munroe: What the business man demands of the high-school graduate, p. 18-24.

1039. **New Jersey state teachers' association.** Annual report and proceedings of the 58th annual meeting . . . held at Atlantic City, N. J., December 26-28, 1912. 277 p. 8°. (Charles C. Boyer, secretary, Atlantic City, N. J.)

Contains: 1. C. N. Kendall: Address [Tendencies in education in the last twelve years] p. 29-36. 2. E. G. Cooley: The vocation and the school, p. 45-55. 3. Henry Van Dyke: The teaching of English in schools, p. 56-66. 4. Increased efficiency in school work. T. M. Balliet: By improved methods and by elimination, p. 67-78; D. C. Bliss: By testing, p. 78-83. 5. J. C. Stone: The modernization of arithmetic, p. 84-97. 6. A. S. Osborn: Education and technical training in music, p. 98-101.

1040. **New York (State) Associated academic principals and Council of elementary school principals and teachers.** Proceedings of the 28th annual meeting . . . at Syracuse high school, Dec. 26-28, 1912. Oneonta, N. Y., Oneonta press printers [1913] 172 p. 8°. (E. P. Smith, secretary, North Tonawanda, N. Y.)

Contains: 1. N. G. Schaeffer: Has the school heard the voice of conservation? p. 14-18. 2. F. D. Boynton: College domination of the high school, p. 19-29. 3. H. H. Horner: The real purpose of regents' examinations, p. 29-48. 4. H. V. Littell: Testing efficiency in schools, p. 67-75. 5. L. V. Arnold: The flexible course of study, p. 101-10. 6. C. W. Blessing: Essential qualifications of a teacher, p. 111-18. 7. C. H. De Sohn: The elementary school with a vocational department, p. 118-23. 8. A. G. Keller: Commercial and industrial geography, p. 123-31. 9. The monthly card, p. 141-45. 10. Sarah L. Arnold: What next in education? p. 145-51. 11. Anna A. Green: Business administration of the public school, p. 170-72.

1041. **New York state teachers association.** Proceedings . . . sixty-seventh annual meeting, at Buffalo, N. Y., November 25, 26, 27, 1912. 323 p. 8°. (R. A. Searing, secretary, North Tonawanda, N. Y.)

Contains: 1. E. B. Bryan: The gospel of work, p. 6-12. 2. J. M. Thomas: De senectute pedagogi, p. 13-19. 3. T. E. Finegan: Establishment and development of New York's school system, p. 23-41. 4. Henry Suzzallo: Reorganization of the teaching profession, p. 48-56. 5. C. E. Rhodes: The efficient teacher of English, p. 59-67. 6. W. R. Heath: The demands of the business world for good English, p. 71-75. 7. Lee Galloway: Business organization in a scheme of commercial education, p. 92-100. 8. Jean Y. Ayer: Literature in the rural school, p. 120-25. 9. Percy Hughes: Place of the elementary teacher in the administration of the school, p. 155-61. 10. Eleanor H. Johnson: Social service and the public schools, p. 166-77. 11. W. F. Gordy: Teaching of history from the standpoint of a proper international morality, p. 181-85. 13. Sherman Williams: School libraries, p. 216-20. 13. C. W. Bardeen: Forty years in educational journalism, p. 233-39. 14. J. P. Behm: Will Latin follow Greek out of the high school. p. 244-51. 15. Miss F. Tilly: Use of phonetics in the teaching of modern languages, p. 265-71.

1042. **North Central association of colleges and secondary schools.** Proceedings of the eighteenth annual meeting . . . held at Chicago, Illinois, March 21-22, 1913. Published by the Association, 1913. 148 p. 8°. (T. A. Clark, secretary, Urbana, Ill.)

Contains: 1. W. J. S. Bryan: President's address [Secondary education], p. 5-20. 2. J. D. Elliff: The use and abuse of the certificating system, p. 47-55. 3. K. C. Babcock: The naming of an approved list of colleges, p. 82-103. 4. F. M. Leavitt: Sanity in industrial education, p. 103-13; Discussion [by W. H. Campbell] p. 113-25.

1043. **North Dakota education association.** Proceedings, twenty-sixth annual session . . . held at Grand Forks, October 23, 24, and 25, 1912. Devils Lake, N. D., Journal publishing co., 1913. 268 p. 8°. (W. E. Parsons, secretary, Bismarck, N. D.)

Contains: 1. T. A. Hillyer: Economy in education, p. 36-39. 2. Dr. Todd: Ethics as applied to teachers and school boards, p. 40-47. 3. F. L. Whitney: The state normal school course of study, p. 60-67. 4. C. C. Root: Relation between the state high school and state normal school courses of study, p. 68-70. 5. Wells Smith: The high school as a social center, p. 83-88. 6. W. J. Alexander: The teacher's term of office, especially in North Dakota, p. 89-93. 7. Y. G. Barnell: Methods used by the superintendent in dealing with teachers, p. 94-99. 8. W. A. Wilkinson: Imitation and education, p. 108-13. 9. Mayme Sorenson: How to provide more motivation for school work, p. 114-17. 10. G. F. Ruediger: How much public health and sanitation should be taught in the grades and in the rural schools? p. 123-27. 11. V. P. Squires: A vocational education, p. 128-33. 12. Rosanna Duffy: The county superintendency and its place in the educational system, p. 148-53. 13. J. M. Gillette: Report of the committee on sociology in the normal schools and high schools—sociology in the high schools, p. 169-72. 14. G. R. Davies: Sociology in the normal schools, p. 173-74. 15. G. W. Randlett: Vocational education in the rural schools, p. 223-24.

1044. **Ohio state teachers' association.** Proceedings of the 66th annual session, Cedar Point, Ohio, June 24-26, 1913. Ohio educational monthly, 62: 294-398, July 1913.

Contains: 1. Margaret W. Sutherland: The enrichment of the teacher's life—inaugural address, p. 297-301. 2. Louise John: Are the public schools a failure? p. 301-305. 3. H. L. Brittain: Co-operative school surveying, p. 305-308. 4. F. W. Miller: Preparation of the country-school teacher, p. 308-14. 5. A. P. Sandles: Living teachers and living leaders, p. 314-19. 6. H. V.

Hotchkiss: Scientific management and schoolroom efficiency, p. 332-42. 7. H. G. Williams: Ohio's investment in her public schools, p. 354-63. 8. A. C. Eldredge: Comparative cost of city government and schools, 1900-1910, p. 363-66. 9. N. D. O. Wilson: Representative business and the cost of schools, p. 368-71. 10. D. F. Masters: Six grades instead of eight in elementary schools, p. 372-74.

1045. **Oklahoma state educational association.** Proceedings . . . Oklahoma City, December 26-29, 1912. Oklahoma City, Harlow-Ratliff printing co. 109 p. 8°. (W. W. Cunningham, secretary, Shawnee, Okla.)

Contains: 1. T. W. Butcher: Problems for the public schools, p. 40-43. 2. J. F. Wellemeyer: Measuring the efficiency of the grade teacher by definite standards, p. 48-52. 3. R. F. Hannum: The "Jeremiad" of a grade principal, p. 57-62. 4. O. N. Roth: The office of the church school, p. 78-81. 5. E. F. Allen: Keeping up professionally, p. 100-105.

1046. **Society for the promotion of engineering education.** Proceedings of the twentieth annual meeting, held in Boston, Mass., June 26-29, 1912. Part I. Volume XX. Ithaca, N. Y., Cornell university, 1913. 226 p. 8°.

Contains: 1. Harrington Emerson: Educational demands of modern progress, p. 4-11. 2. Meyer Bloomfield: Education and efficient living, p. 32-36. 3. Wilfred Lewis: The place of the college in collecting and conserving the data of scientific management, p. 55-61. 4. Walter Rautenstrauch: Teaching the principles of scientific management, p. 82-93. 5. H. F. J. Porter: Absences from classes one measure of inefficiency, p. 112-17. 6. F. P. McKibben: Absences from classes one measure of inefficiency, p. 112-17. 7. W. A. Hillebrand: The problem of efficiency in teaching, p. 118-28. 8. William Kent: Academic efficiency, p. 145-60. 9. H. Wade Hibbard: Operating engineering schools under scientific management, p. 161-81. 10. G. H. Shepard: Efficiency in engineering education, p. 182-204. 11. S. E. Whitaker: The application of scientific management to the operation of colleges, p. 205-16.

1047. **South Carolina state teachers' association.** Proceedings of the fortieth annual meeting . . . held at Charleston, S. C., April 25, 26, and 27, 1912. Columbia, S. C., State co., printers, 1913. 51 p. 8°. (L. T. Baker, secretary, Columbia, S. C.)

Contains: 1. W. W. Finley: Practical education, p. 25-32. 2. Lizzie Rogers: The achievements and plans of the school improvement association, p. 33-37.

1048. **South Dakota educational association.** Proceedings of the thirtieth annual session . . . held at Mitchell, Nov. 25-26-27, 1912. Mitchell, South Dakota, Pub. by the Executive committee [1913?] 232 p. 8°. (J. C. Lindsey, secretary, Mitchell, S. D.)

Contains: 1. H. C. Johnson: Laggard in the educational procession, p. 57-63. 2. G. W. Nash: Some South Dakota educational problems, p. 64-73. 3. A. N. Hume: The farmers' schools and the state p. 74-81. 4. E. C. Perisho: Ships or schools? p. 82-87. 5. H. K. Warren: Christian college and the state, p. 88-94. 6. C. G. Lawrence: The widening sphere of the state's activities in education, p. 95-104. 7. H. E. Legler: The library as a factor in education and citizenship, p. 105-19. 8. J. G. Parsons: Health supervision of schools, p. 126-33. 9. L. E. Camfield: The country high school, p. 146-50. 10. E. T. Peters: The place of the school board in educational progress, p. 213-21.

1049. **Southeast Missouri teachers' association.** 37th annual meeting . . . Proceedings and addresses, Cape Girardeau, Missouri, October 24, 25, 26, 1912. 94 p. 8°. (Willie Roberta Bruner, secretary, Asherville, Mo.)

Contains: 1. W. L. Barrett: Criticisms of the public schools, p. 13-25. 2. Clara E. Graham: Are public schools a failure? Negative for elementary and rural schools, p. 25-34. 3. Lora Harney: A plea for better music in the grades, p. 50-54. 4. L. E. Proffer: Shall Latin go? p. 60-64. 5. W. E. Randol: How can we make our pupils more proficient? p. 67-70.

1050. **Southern association of college women.** Proceedings in full of tenth annual meeting, Richmond, Va., April 15-18, 1913. 117 p. 8°. (Elizabeth A. Colton, secretary, Raleigh, N. C.)

Contains: 1. E. K. Graham: A fundamental factor in the education of women, p. 10-17. 2. Eleanor L. Lord: What should the bachelor's degree represent? p. 17-28. 3. L. F. Abbott: Keats for the kitchen, p. 28-37. 4. Elizabeth A. Colton: Improvement in standards of Southern colleges since 1900, p. 37-56.

1051. **Texas state teachers' association.** Proceedings and addresses of the thirty-fourth annual meeting, November 28, 29 and 30, 1912, Fort Worth, Texas. (T. D. Brooks, secretary, Hillsboro, Tex.)

Contains: 1. E. A. Cockrell: An American's impressions of England and England's schools, p. 6-11. 2. J. A. Puffer: The eternal boy, p. 12-25. 3. O. L. Dunaway: The future rural school of the South, p. 27-30. 4. F. M. Bralley: Present educational needs in Texas, p. 52-55. 5. O. J. Kern: The national welfare movement, p. 55-68. 6. W. B. Bizzell: The exotic rural teacher, p. 153-56. 7. Report of the Committee for the investigation of the teaching of history in the state of Texas, p. 241-48.

1052. **Washington educational association.** Addresses and proceedings of the twenty-sixth annual session, Everett, December 26-28, 1912. [Seattle, Wash., Northwest journal of education, 1913] (O. C. Whitney, secretary, Tacoma, Wash.)

Contains: 1. J. C. Zeller: The high school curriculum, p. 44-51. 2. N. D. Showalter: Rural school supervision, p. 51-53. 3. W. M. Kern: Vocational education and the continuation school, p. 53-59. 4. I. W. Howerth: Education and public health, p. 63-66. 5. I. W. Howerth: Education and industry, p. 86-92. 6. C. W. Hodge: Industrial education—its contribution to the pupil, p. 93-98. 7. Frank Deerwester: Socializing the rural schools, p. 107-13. 8. H. O. Button: Is consolidation of rural schools advisable? p. 154-60.

1053. **Wisconsin teachers' association.** Proceedings of the sixtieth annual session, held at Milwaukee, November 8 to 10, 1912. Madison, Wis., Democrat printing company, state printers, 1913. (M. A. Bussewitz, secretary, Milwaukee, Wis.)

Contains: 1. Mrs. Mary D. Bradford: Active membership in the Wisconsin teachers' association, p. 17-25. 2. W. H. Allen: Next steps in school efficiency, p. 26-32. 3. L. D. Harvey: The education of girls, p. 32-40. 4. Henry Suzzallo: Reorganization of the teaching profession, p. 40-49. 5. Mrs. F. Schoff: Child welfare, p. 49-57. 6. Frank Gunsaulus: The book and the people, p. 57-60. 7. Henry Suzzallo: Tradition and reform in the higher schools, p. 64-72. 8. C. A. Fullerton: The principles of scientific management applied to teaching music in the public schools, p. 76-80. 9. Ernest Burnham: The country school as a civic and social center, p. 81-85. 10. W. H. Allen: Testing efficiency of boards of education, p. 95-98. 11. Isabel Johnson: A girl's course in physics, p. 124-32. 12. L. W. Fulton: An experiment in segregation, p. 132-36. 13. E. G. Smith: Disciplinary value of chemistry, p. 136-40. 14. J. B. Davis: Vocational and moral guidance in the high school, p. 159-65. 15. Mrs. F. Schoff: Laying foundations of character, p. 165-71. 16. Anna E. Logan: Ideals of scientific pedagogy and the Montessori experiment, p. 175-80. 17. C. H. Judd: Practical applications of reading, p. 181-83. 18. Lutie E. Stearns: The teacher's greatest tool, p. 183-86.

BUREAU OF EDUCATION: RECENT PUBLICATIONS.

1054. Accredited secondary schools in the United States, by Kendric Charles Babcock. Washington, 1913. 65 p. (Bulletin, 1913, no. 29)
1055. A comparison of public education in Germany and in the United States, by George Kerschensteiner. Washington, 1913. 15 p. (Bulletin, 1913, no. 24)
1056. Education in the South. Abstracts of papers read at the sixteenth Conference for education in the South, held at Richmond, Va., April 15 to 18, 1913. Washington, 1913. 87 p. (Bulletin, 1913, no. 30)
1057. Expressions on education by American statesmen and publicists. Washington, 1913. 39 p. (Bulletin, 1913, no. 28)
1058. The Georgia club at the State normal school, Athens, Ga., for the study of rural sociology, by E. C. Branson. Washington, 1913. 41 p. (Bulletin, 1913, no. 23)
1059. German industrial education and its lessons for the United States, by Holmes Beckwith. Washington, 1913. 154 p. (Bulletin, 1913, no. 19)
1060. Good roads arbor day. Suggestions for its observance, compiled by Susan B. Sipe. Washington, 1913. 29 p. illus. (Bulletin, 1913, no. 26)

1061. Illiteracy in the United States and an experiment for its elimination. Washington, 1913. 38 p. illus. (Bulletin, 1913, no. 20)
1062. Industrial education in Columbus, Ga., by Roland B. Daniel. Washington, 1913. 30 p. illus. (Bulletin, 1913, no. 25)
1063. Prison schools, by A. C. Hill. Washington, 1913. 47 p. illus. (Bulletin, 1913, no. 27)
1064. Special features in city school systems. Washington, 1913. 61 p. (Bulletin, 1913, no. 31)
1065. Report of the Commissioner of education for the year ended June 30, 1912. v. 1-2. Washington, Government printing office, 1913. 8°.
- Volume:* Commissioner's introduction, p. xv-xxvi. 1. W. C. Ryan, jr.: Survey of education during 1911-12, p. 1-48. 2. J. C. Boykin: Educational legislation in 1912, p. 49-82. 3. K. C. Babcock: Higher education, p. 83-124. 4. W. R. Hood: City school systems, 1911-12, p. 125-75. 5. A. C. Monahan: Rural education, p. 177-225. 6. H. F. Wright: Roman Catholic schools, p. 227-41. 7. T. J. Jones: Recent movements in negro education, p. 243-56. 8. M. P. E. Grossmann: Progress of the movement for the benefit of the exceptional child, in the year 1912, p. 257-62. 9. F. B. Jenks: A review of agricultural education in 1911-12, p. 263-80. 10. C. A. Prosser: Progress in vocational education, p. 281-97. 11. F. B. Dresslar: Typical health-teaching agencies of the United States, p. 299-358. 12. Mary H. Weeks: Purposes, methods, and results of the parent-teacher cooperative associations of the National congress of mothers, p. 359-73. 13. Report of the secretary of the National education association, p. 375-77. 14. J. D. Wolcott: Recent aspects of library development, p. 379-406. 15. Outlying possessions and dependent peoples, p. 407-58. 16. Anna T. Smith: Educational activities in Canada, p. 459-69. 17. Education in the Latin-American states, p. 471-85. 18. Great Britain and Ireland, p. 487-510. 19. Education in the kingdoms of northern Europe, p. 511-20. 20. Educational movements in France and Switzerland, p. 521-38. 21. W. C. Ryan, jr.: Education in Germany, p. 539-58. 22. Education in southern Europe, p. 559-77. 23. Education in Russia, p. 579-87. 24. Current movements in Asia and Africa, p. 589-604. 25. Education in Australia and New Zealand, p. 605-15. 26. Events of international interest, p. 617-35. (Volume 2 contains statistical matter.)

BOOKS, PAMPHLETS, PERIODICAL ARTICLES.

CURRENT EDUCATIONAL CONDITIONS.

1066. **Bonser, Frederick G.** Some random observations on the schools of Great Britain. School news and practical educator, 26: 494-96, July 1913.
Deals with the curriculum of the schools of England. Claims that it includes about the same number of subjects as our own, but that the content differs quite markedly in some subjects.
1067. **Clasen, Joachim.** Beobachtungen und erfahrungen eines schulmannes in den Vereinigten Staaten von Amerika. Pädagogisches archiv, 55: 350-70, heft 6, 1913.
Sharply critical of American educational conditions, especially teachers. Declares: "There is no real teaching profession in our sense of the word."
1068. **Corson, O. T.** [False attacks upon the public schools.] Western school journal, 29: 151-52, June 1913.
Reply to addresses of welcome by Mayor Blankenburg and Supt. Brumbaugh, at the Philadelphia meeting of the Department of superintendence of the National education association, February 26, 1913.
1069. **Ferrars, M. H.** Modern India and education. Internationales archiv für schulhygiene, 9: 37-65, no. 1, 1913.
A highly important article in which the whole problem of civilization and education is illuminated.
1070. **Fuenzalida Grandón, Alejandro.** La enseñanza en Alemania; su dirección—su organización—su administración—el Ministerio de instrucción pública de Prusia. Santiago de Chile, Imprenta nacional, 1913. xv, 441 p. 8°.

1071. **Grandgent, Charles Hall.** The dark ages. *In* Modern language association of America. Publications, vol. xxviii, no. 1, March 1913. p. xlii-lxx. President's address at the annual meeting of the Modern language association in Philadelphia, Pa., December 26, 1912.
The author suggests that the current definition be altered to something like this: "The *dark ages*, an epoch in the world's history, beginning with or shortly after the French revolution, marked by a general extension and cheapening of education resulting in a vast increase of self-confident ignorance. It was induced by the gradual triumph of democracy, and will last until the masses, now become arbiters of taste and science, shall have been raised to the level formerly occupied by the privileged classes."
1072. **Henning, Karl L.** Volksementartung und schule in den Vereinigten Staaten von Nordamerika. *Pädagogisches archiv*, 55: 371-384, heft 6, 1913.
The writer sums up, for German consumption, a mass of sensational attacks on American life and education.
1073. **Kuo, P. W.** The effect of the revolution upon the educational system of China. *Journal of race development*, 4: 72-85, July 1913.
"The present ministry of education has a bureau, known as the Bureau of social education, the duty of which is to advance the whole movement, namely, to popularize education through quasi-educational institutions."
1074. **Moulder, Priscilla E.** A working woman's views on modern education, *Westminster review*, 180: 28-35, July 1913.
Conditions in England. Writer protests against the modern cramming system.
1075. **Roger, Maurice.** Le deuxième Congrès international d'éducation (2^e article), *Revue pédagogique*, 62: 333-51, April 1913.
1076. **Tsao, Y. S.** The relation of the returned students to the Chinese revolution. *Journal of race development*, 4: 96-109, July 1913.
Historical and descriptive. Shows the constructive work of students who had received Western education.
1077. **Wead, E. Young.** The training of a people: what the United States has done for education in the Philippines. *Independent*, 75: 303-8, August 7, 1913.
1078. **Wychgram, Jakob.** Das höhere und mittlere unterrichtswesen in Deutschland. Berlin und Leipzig, G. J. Göschen, 1913. 130 p. 12°. (Sammlung Göschen. [644].)
1079. **Yen Sun Ho.** Chinese education from the western viewpoint. Chicago, New York, Rand, McNally & company [1913]. 91 p. 12°.

PEDAGOGICS AND DIDACTICS.

1080. **Barbian, J.** A plea for the man teacher. *Catholic educational review*, 6:35-40, June 1913.
Shows the absolute necessity of men teachers for boys, claiming that "if there is a distinct type of manly perfection, it takes a man to bring out all its hidden capabilities and to develop its germinal adumbrations in the boy."
1081. **Bascom, John.** Things learned by living. New York and London, G. P. Putnam's sons, 1913. xv, 228 p. front. (port.) 8°.
Personal reminiscences and reflections of the author.
1082. **Ferrer Guardia, Francisco.** The origin and ideals of the Modern school, tr. by Joseph McCabe. New York and London, G. P. Putnam's sons, 1913, xiv, 147 p. front. (port.) 12°.
1083. **Green, John Alfred.** Life and work of Pestalozzi. London, W. B. Clive, 1913. viii, 393 p. 12°.
"Pestalozzi's chief educational writings": p. 375-84.

1084. **Holmes, Edmond.** The tragedy of education. London, Constable & company, 1913. vii, 100 p. 12°. . .
The author says: "The drama of education, as I read it, is a veritable tragedy. For, with the best intentions, the leading actors in it, the parents and teachers of each successive generation, so bear themselves towards their children and pupils as to entail never-ending calamities on the whole human race."
1085. **Kabisch, Martin Richard.** Das neue geschlecht; ein erziehungsbuch. Göttingen, Vandenhoeck & Ruprecht, 1913. 500 p. 12°.
1086. **Kessler, Kurt.** Das lebenswerk der grossen pädagogen; betrachtungen über die entwicklung und verwirklichung der pädagogischen ideen. Leipzig und Berlin, J. Klinkhardt, 1913. 137 p. 8°. . .
"Literaturnachweis": p. [134]-135.
1087. **Mark, Harry Thiselton.** Modern views on education. London & Glasgow, Collins' clear-type press [1913]. 264 p. 16°. (The nation's library.)
Bibliography: p. [255]-260.
1088. **Matthias, Adolf.** Erlebtes und zukunftsfragen aus schulverwaltung, unterricht und erziehung. Ein buch für freunde deutscher bildung. Berlin, Weidmann, 1913. 319 p. 8°.
1089. **Ostermann, W.** Die pädagogik unserer klassiker im zusammenhange mit ihrer weltanschauung. Berlin, Union deutsche verlags-gesellschaft, 1913. 276 p. 8°.
1090. **Pidal, Pedro.** Instrucción pública. Madrid, F. Beltrán, 1913. 535 p. 8°. . .
Includes brief characterizations of the educational institutions of the United States.
1091. **Selden, Frank Henry.** What is a liberal education? American school board journal, 46: 17-18, 63-65, June 1913.
1092. **Snedden, David.** Problems of educational readjustment. Boston, New York [etc.] Houghton Mifflin company [1913]. vii p., 1 l., 262 p. 8°. . .
CONTENTS:—New education and educational readjustment.—The new basis of method.—What is liberal education?—Why study history?—The practical arts in liberal education.—Differentiated programs of study for older children in elementary schools.—The opportunity of the small high school.—Debatable issues in vocational education.—Problems in the psychology of vocational education.—Centralized vs. localized administration of public education.
1093. **Vives, Juan Luis.** Vives: on education. A translation of the De tradendis disciplinis of Juan Luis Vives; together with an introduction by Foster Watson. Cambridge, University press, 1913. clvii, 328 p. front. 12°.

EDUCATIONAL PSYCHOLOGY, CHILD STUDY.

1094. **Courtis, S. A.** The reliability of single measurements with standard tests. Elementary school teacher, 13: 486-504, June 1913.
Illustrated with graphic statistics, tables, etc. Continued from vol. 13, no. 7, March 1913. Says: "The question of the reliability of a single measure of a child's ability to write the answers to the addition combinations seems to the writer better shown by repeated measurements at intervals over a long period of time than by the creation of an artificial practice series."
1095. **Dougherty, Mary L.** Report on the Binet-Simon tests given to four hundred and eighty-three children in the public schools of Kansas City, Kansas. Journal of educational psychology, 4: 338-52, June 1913.
"From the results of this investigation it would seem that almost half of the children examined are mentally more or less retarded as tested by the Binet scale."
1096. **Holbrook, Sara M.** The home environment as affecting the physical and mental growth of school children. Journal of home economics, 5: 211-17, June 1913.
A study of 580 children. Americans show a much better physical condition than other nationalities studied.

1097. **Lehmann, Alfred.** Den individuelle sjælelige udvikling. Grundtræk af den pædagogiske psykologi. Copenhagen, J. Frimodt, 1913. 167 p. 8°.
1098. **Lode, Artur.** Die unterrichtsfächer im urteil der schulkinder. Zeitschrift für pädagogische psychologie, 14: 291-96, 320-26, May, June 1913.
A highly interesting attempt to ascertain the "favorite studies" of pupils. To be continued.
1099. **Luca, N. de.** Infanzia cara; note di psicologia infantile e pedagogia sociale ad uso delle scuole normali e de' maestri. Roma-Napoli-Milano, Albrighi, Segati & c., 1912. 263 p. 12°.
"Bibliografia": p. [257]-259.
1100. **Montessori, Maria.** Pedagogical anthropology, tr. from the Italian by Frederic Taber Cooper, with 163 illustrations and diagrams. New York, Frederick A. Stokes company, 1913. xi, 508 p. front. (port). illus., plates, tables, diagrs. 8°.
The present volume comprises the lectures given by the author in the University of Rome, during a period of four years. cf. Pref.
1101. **Montori, Arturo.** La fatiga intelectual. Habana, Imp. de "Cuba pedagogica," 1913. 105 p. 8°.
1102. **Picht, Carl.** Hypnose, suggestion und erziehung. Leipzig, W. Klinkhardt, 1913. xii, 72 p. 8°.
1103. **Thorndike, Edward Lee.** Educational psychology. Volume 1. The original nature of man. New York, Teachers college, Columbia university, 1913. 327 p. illus., diagrs. 8°.
"Bibliography of references made in the text": p. 313-18.

SPECIAL METHODS OF INSTRUCTION.

1104. **Clapp, Henry L.** Moving-picture shows. Education, 33: 620-28, June 1913.
Emphasizes value of moving-picture shows as a means of giving instruction and information in school or out.
1105. **Dallolio, Alberto.** Le Colonie scolastiche bolognesi; note ricordi. Bologna, N. Zanichelli, 1913. 104 p. 8°.
1106. **Partridge, George Everett.** Story telling and education. Storytellers' magazine, 1: 19-23, June 1913.
1107. **Richter, Wilhelm.** Der kinematograph im universitätsunterricht. Akademische rundschau, 1: 524-32, June 1913.
Discusses university subjects in which moving pictures can be used to advantage.
1108. **Yamada, Soshichi.** A study of questioning. Pedagogical seminary, 20: 129-86, June 1913.
Bibliography: p. 181-83.

SPECIAL SUBJECTS OF CURRICULUM.

1109. **Baker, Franklin T.** The teacher of English. English journal, 2: 335-43, June 1913.
Gives the qualities and acquirements imperatively needed for teaching English.
1110. **Barnes, Walter.** English in the country school. Chicago, New York, Row, Peterson & company [1913] 286 p. 12°.
1111. **Betz, William.** What mathematical subjects should be introduced in the curriculum of the secondary school? Mathematics teacher, 5: 218-33, June 1913.
This paper was read at the Philadelphia meeting of the Association of teachers of mathematics in the Middle States and Maryland, November 1912. "Since its original presentation, a number of changes were made in its form, in order to adapt it to a wider circle of readers. For the same reason a brief list of references was added."

1112. **Chickering, Edward C.** Efficiency methods in Latin teaching. *Educational review*, 46: 15-24, June 1913.
1113. **Earhart, Will.** A presentation of the high school course which was adopted by the Music supervisors' national conference—what it is and how to administer it. *School music*, 14: 5-9, May-June 1913.
Discussion, p. 10-15.
Read at the meeting of the National education association at Chicago, Ill., July 1912.
1114. **Genthe, K. W.** Das system der höheren schulen Amerikas und der biologische unterricht. *Monatshefte für den naturwissenschaftlichen unterricht*, 6: 247-60, heft 5, 1913.
Biology in the American high school: Equipment; training of teachers. In the colleges: purpose, etc.
1115. **Kelleher, James V.** Shall we teach dead languages? *Western journal of education*, 19: 3-4, July 1913.
Claims that Latin and Greek should be well and thoroughly taught, in so far as they are a foundation for the better understanding of English. Thinks that a one-year course in Latin and Greek would suffice for all practical purposes. Favors teaching the modern languages rather than spending so much time on the dead languages.
1116. **Kimball, Dexter S.** Practical work in science teaching. *Science*, n. s. 38: 144-49, August 1, 1913.
1117. **Pulsifer, Harold T.** Poetry and the school. *Outlook*, 104: 521-23, July 5, 1913.
Criticises the method of teaching poetry to children in our schools. Condemns technical dissection, etc.
1118. **Rommel, F.** Die deutsche schule und ihre richter. *Humanistische gymnasium*, 24: 90-97, heft 3, 1913.
Cites opinions of numerous prominent Germans as to their faith in classical training.
1119. **Roques, P.** Dix ans de méthode directe. *Revue universitaire*, 22: 108-15, July 1913.
An unfavorable criticism of the direct method of teaching modern languages.
1120. **Ruediger, W. C.** Realness in science teaching. *School science and mathematics*, 13: 461-68, June 1913.
1121. **Sheldon, Winthrop D.** Vocal English. *Education*, 33: 632-44, June 1913.
Calls attention to the grave defects of vocalization of the average American—"defects which are the result of indifference and lack of training."
1122. **Simons, Sarah E.** American literature and the modern magazine in the high-school course. *English journal*, 2: 357-61, June 1913.
"A paper read before the National council of teachers of English at Philadelphia, March 1, 1913."
1123. **Stephens, H. Morse.** Courses in history in the junior colleges. *History teacher's magazine*, 4: 153-55, June 1913.

KINDERGARTEN AND PRIMARY SCHOOL.

1124. **Bizzell, W. B.** The contribution of kindergartens to other social interests. *Texas school journal*, 30: 1-7, June 1913.
Address delivered at the graduating exercises of the Fort Worth kindergarten college on May 16, 1913.
1125. **Curtis, Fanniebelle.** The problems of the kindergarten in large cities. *Kindergarten review*, 23: 615-19, June 1913.
"Address given at the International kindergarten union convention, Washington, D. C."
1126. **Palmer, Luella A.** Some reconstructive movements within the kindergarten. *Psychological clinic*, 7: 97-107, June 15, 1913.

1127. **Salter, Emma G.** Montessori method: some recent criticisms. *World's work* (London) 22: 158-61, July 1913.
Discusses the discipline of liberty; self-restraint and obedience; comparison with Froebel, etc.
1128. **Smith, Sadie.** The Montessori system and the deficient. *Ohio educational monthly*, 62: 431-34, August 1913.
1129. **Tuttle, Madge.** A comparison of the Montessori and Froebelian systems. *Primary plans*, 11: 9, 41, June 1913.
1130. **Vanderwalker, Nina C.** The standardizing of kindergarten training. *Kindergarten-primary magazine*, 25: 263-67, June 1913.
1131. **Zaner, C. P.** The Montessori movement as applied to writing. *Colorado school journal*, 28: 21-25, June 1913.

RURAL EDUCATION.

1132. **Brittain, Horace L.** Cooperative school surveying. *Ohio teacher*, 34: 10-12, August 1913.
1133. **Curtis, Henry S.** The rural social center. *American journal of sociology*, 19: 79-90, July 1913.
Reviews conditions in the United States. Discusses method of organization; the school social center association; school improvement associations, etc.
1134. **Foght, Harold W.** The rural school. *Nebraska teacher*, 16: 10-11, August 1913.
Claims "(1) without strong men and women professionally prepared for their work in the redirected rural schools there can be no satisfactory adjustment of rural life; and (2) unless the schools are reorganized on a more satisfactory basis for administrative and supervisory purposes the schools themselves can not become genuinely 'redirected' nor their management become honestly efficient, economical, and intelligent."
1135. **Jones, Anna L.** Suggestions for organizing and conducting a county school fair. *Virginia journal of education*, 6: 412-16, June 1913.
1136. **McDonald, Ellen B.** Fit the rural school to the community. *Business America*, 14: 164-70, August 1913.
Discusses the possibilities in the course of study, agriculture in rural schools, agricultural contests, and neighborhood interests.
1137. **Marrinan, John J.** Vocational education for the rural school. *Educational review*, 46: 39-46, June 1913.
Summing up, the writer says: "Shall the epidemic of secondary school trades education spread its short-sighted contagion, or will practical arts instruction be consecrated to the larger task of revitalizing the rural community?"
1138. **Nearing, Scott.** Where the rural school has made good. *Ladies' home journal*, 30: 22, 60-62, June 1913.
1139. **Wild, Laura H.** Efficiency and the rural school. *Survey*, 30: 525-28, July 19, 1913.
Discusses the larger Ohio state school survey. The legislature appropriated \$10,000 for a state-wide investigation of schools.
1140. **Winship, A. E.** Rural Cook county's leadership. *Journal of education*, 77: 693-96, 707-708, June 19, 1913.
Tells what is being accomplished in Cook county, Ill. Mentions particularly the grouping of all one-room schools of Cook county into five groups, no one of which contains more than twenty-five schools. Each group has an expert leader in school and country life who has a salary of \$2,000 and works 365 days in the year.

SECONDARY EDUCATION.

1141. **Brown, J. Ward.** American secondary school fraternities. A manual. New York, The Maske Brown company, 1913. 203 p. 12°.
Contains a descriptive list of high-school fraternities in the country, with articles in their support by various authors.
1142. **Butler, Nathaniel.** Report of the 25th educational conference of the secondary schools in relation with the University of Chicago. School review, 21: 388-411, June 1913.
Condensed résumé of proceedings and papers. Conference held April 18 and 19, 1913.
1143. **California teachers' association.** The high school fraternity. Report of the committee, High school teachers' association. Sierra educational news, 9: 487-97, June 1913.
W. J. Cooper, chairman.
Gives a brief history of the high school fraternity movement, and the nature of the anti-fraternity laws existing in the various states.
1144. **Caspar, M.** Die reform der höheren schulen in Preussen. Berlin, E. Felber, 1913. xi, 350 p. 8°.
CONTENTS: Einleitung: Begründung der notwendigkeit der schulreform. Erster teil: Kritik der bestehenden zustände. Zweiter teil: Die neue reformschule oder das schülerheim.
1145. **Gray, Herbert Branston.** The public schools and the Empire. London, Williams & Norgate, 1913. 374 p. 8°.
1146. **Henning, Karl L.** Zür psychologie der amerikanischen jugend. Neue bahnen, 24: 435-49, July 1913.
A startling article on the supposed shortcomings of youth in American high schools.
1147. The reorganization of secondary education. Journal of education, 77: 543-44, May 15, 1913; 78: 17-18, 44-45, July 3, 10, 1913.
These are three of ten articles to appear during the next few months. They will inform the readers of the Journal of education of the progress of nine committees of the National education association, appointed to report upon the reorganization of the various high school subjects.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1148. **Crissman, G. R.** More efficient educational organization. Missouri school journal, 30: 291-95, July 1913.
Claims that there are three distinct types of educational organizations in this country. The first devotes itself to the discussion of educational questions; the second deals with the organization and supervision of the teaching staff primarily for economic betterment, while the third combines these two features. The purpose of this paper is to demonstrate that the third type of educational organization is the only one that can render to the profession the kind of service needed.
1149. **Eberhard, —.** Universitätsfähigkeit der pädagogik. Pädagogische warte, 20: 773-76, July 15, 1913.
Conclusion of a continued article. This installment reviews the work of Teachers college, Columbia university; Clark university, the Bureau of education, and other American educational agencies.
1150. **Hamilton, W. I.** Comparative table of state insurance systems for teachers in the United States. Journal of education, 77: 705, June 19, 1913; 78: 20, July 3, 1913.
Gives teachers' insurance systems in seven states: New Jersey, Rhode Island, New York, Vermont, Maine, California, and Massachusetts.
1151. **Menzel, G.** Die aufbringung der lehrerbesoldung ausserhalb Preussens. Pädagogische zeitung, 42: 500-1, July 3, 1913.
Attempts to classify salary increases of teachers in the German states other than Prussia.
1152. Pädagogik und universität. Pädagogische zeitung, 42: 529-32, July 17, 1913.
Describes the status of pedagogy at German universities.

1153. **Pope, Elfrieda H.** Women teachers and equal pay. Popular science monthly, 83: 65-72, July 1, 1913.
Advocates equal pay.
1154. **Trusler, Harry R.** The law in its relation to the teacher—VI. Reasonableness of rules and regulations. Normal instructor, 22: 14, 50, June 1913.

HIGHER EDUCATION.

1155. **Amira, Karl von.** Reform der doktorpromotion. Akademische rundschau, 1: 564-85, July 1913.
Claims requirements for the doctor's degree in Germany are no longer as exacting as they should be.
1156. **Bok, Edward.** Is the college making good? What the letters of 500 college seniors tell. Outlook, 104: 851-57, August 16, 1913.
Interprets the results of a questionnaire sent to seniors in American colleges regarding the benefits received from higher education. Mr. Bok's criticisms are reviewed by several correspondents in the Outlook, 104: 991-95, August 30, 1913, and by H. N. MacCracken in the Nation, 97: 185-86, August 28, 1913.
1157. **Brandon, Edgar E.** The largest Latin-American university. Educational review, 46: 31-38, June 1913.
Describes the work of the University of Buenos Aires.
1158. **Bryce, James.** University and historical addresses, delivered during a residence in the United States as ambassador of Great Britain. New York, The Macmillan company, 1913. 433 p. 8°.
Contains the following addresses of educational interest: What university instruction may do to provide intellectual pleasures for later life; The mission of state universities; What a university may do for a state; Special and general education in universities; The study of ancient literature; On the writing and teaching of history; Some hints on reading.
1159. **Bush-Brown, H. K.** A national university based on national ideals. Science, n. s. 38: 109-14, July 25, 1913.
Says that the establishment of such an institution would not compete or interfere with state and denominational universities which already exist.
1160. **Collins, Sir William.** The University of London. Contemporary review, 104: 12-23, July 1913.
1161. **Gheorgov, Ivan.** Die universitätsbildung in Bulgarien. Pädagogisches archiv, 55: 445-54, heft 7-8, 1913.
History and statistics of university education in Bulgaria.
1162. **Handschin, Charles H.** The American college as it looks from the inside. Popular science monthly, 82: 556-58, June 1913.
Presents the problem: "How shall we ever rear a race of scholars when there is neither pay nor honor in scholarship?"
1163. **Jacobi, Johannes.** Ueber verwaltung und geschäftsführung in amerikanischen hochschulen und colleges. Preussische jahrbücher, 152: 498-508, June 1913.
An interesting statement of administrative problems in American universities by a competent German observer.
1164. **Kühnert, H.** Aus den englischen universitäten. Akademische rundschau, 1: 533-46, June 1913.
The place of sociology in the University of London; student councils; socialist societies in the universities; the student living question.
1165. **Makower, Richard S.** The universities and trade. Westminster review, 180: 68-74, July 1913.
Discusses the irresponsiveness to technical and commercial training of the great universities of Oxford and Cambridge, England.

1166. **Moore, E. S.** Lecture and recitation methods in university instruction. *Science*, n. s. 37: 929-32, June 20, 1913.
 Recommends the freshman adviser system, in a properly restricted form, to offset the freedom of the lecture system.
1167. **More, Paul E.** The paradox of Oxford. *School review*, 21: 369-87, June 1913.
 A discussion of humanism.
1168. **National academy of sciences.** A history of the first half-century of the National academy of sciences, 1863-1913. Washington, 1913. xi, 399 p. illus. 4°.
 Prepared and edited by Frederick W. True.
1169. **Shipley, A. E.** "J." A memoir of John Willis Clark, registry of the University of Cambridge and sometime fellow of Trinity college. London, Smith, Elder & co., 1913. 362 p. ports. 8°.
 "John Willis Clark lived a Cambridge life for almost all his 77 years (1833-1910); and in this memoir we realize once more what some learnt from the lips of 'J.' himself, the momentous changes wrought by the last 50 years in Cambridge manners and methods."—*Athenæum*, July 26, 1913, p. 77.
1170. **Snyder, H. N.** The college under fire. *Methodist review*, 62: 533-45, July 1913.
 Writer thinks that many of the criticisms directed against college administration are deserved. One of the chief things is "to get rid of the unfit." No perfect scheme devised for accomplishing this.
1171. **Stearns, Wallace N.** What does it cost to build a college? *Education*, 33: 616-19, June 1913.
1172. **Tombo, Rudolf, jr.** German and Swiss university statistics. *Science*, n. s. 38: 77-78, July 18, 1913.
1173. **Walcott, Gregory D.** The final examination of seniors in American colleges. *Science*, n. s. 38: 179-85, August 8, 1913.
 Majority of institutions insist upon "scheduling senior examinations at the same time as for other students, and their tendency not to excuse seniors from the second semester or spring term examinations ... would seem to indicate what is best at present." Statistical tables.
1174. **Waterhouse, Eric S.** The future of London university. *London quarterly review*, 5th series, no. 11: 117-26, July 1913.
 The External University of London has stood for "absolute sex equality when the older universities have represented obsolescent prejudice."
1175. **Williams, Charles W.** The scientific study of the college student. *Science*, n. s. 38: 114-20, June 25, 1913.
 Outlines a scheme for such an investigation.

SCHOOL ADMINISTRATION.

1176. **Chamberlain, Arthur Henry.** The growth of responsibility and enlargement of power of the city school superintendent. Berkeley, University of California press, 1913. [283]-441 p. incl. diagrs. 2 fold. tab. 4°. (University of California publications. *Education*, vol. 3, no. 4)
 Bibliography: p. 426-41.
1177. **Cook, Henry R. M.** The standardization of school accounting and of school statistics. *American school board journal*, 46: 13-15, 65-66, 68, June 1913; 47: 13-16, 65, July 1913.
 "The present article ... by the leading exponent of better accounting methods, lays down the basic principles of school accounting."
1178. **Crouzet, Paul.** La vie pédagogique; l'enquête parlementaire sur la réforme de 1902. *Revue universitaire*, 22: 15-29, June 1913.

1179. **Fornelli, N.** Nuove forme di municipalismo scolastico. *Rivista pedagogica*, 6: 453-65, June 1913.
A discussion of school administration in Italy, with a special reference to the regulations in Naples.
1180. **Hanus, Paul H.** Improving school systems by scientific management. *Pittsburgh school bulletin*, 6: 1689-94, June 1913.
Extract from an address. To be continued in the September number.
Discusses the conditions upon which the efficient management of a public school system depends.
1181. **McMurry, Frank M.** Elementary school standards: instruction: course of study: supervision; applied to New York city schools. *Yonkers-on-Hudson, N. Y., World book company*, 1913. viii, 218 p. 8°. (School efficiency series, ed. by P. H. Hanus.)
1182. Tests of school efficiency. By an ex-teacher. *Education*, 33: 604-9, June 1913.
Writes of the New York school inquiry and other educational investigations.
1183. **Tews, Johannes.** Staats- oder kirchenschule? Neue organisationen und bestrebungen zur erhaltung und erweiterung der kirchlichen schulherrschaft. Leipzig und Berlin, J. Klinkhardt, 1913. 38 p. 8°. (Broschüren zur schulpolitik, hrsg. von der Vereinigung für schulpolitik zu Berlin. no. 5)

SCHOOL MANAGEMENT.

1184. **Faust, H. H.** Overcoming retardation in the elementary schools. *Journal of education*, 78: 37-39, July 10, 1913.
Tells how retardation was reduced in Hibbing, Minnesota, during the three years from 1909 to 1912.
1185. **Freni, Giovanni.** La disciplina nella scuola elementare. Catania, Officina tipografica Giannotta, 1913. 91 p. 8°.
1186. **Friedrich, Fritz.** Schulreform durch konzentration. *Pädagogisches archiv*, 55: 337-50, heft 6, 1913.
Suggests a number of changes to lessen burden of school subjects.
1187. **Muir, James N.** How to determine normal progress in school. *Educational review*, 46: 10-14, June 1913.
Discusses the value of such a study in the school system. Presents "the results of tabulating the individual records of the history of 366 pupils in the 5th grade of the Orange, N. J., schools on February 2, 1912."
1188. **Sachse, J. J.** Geschichte und theorie der erziehungsstrafe. 3. verb. aufl. Paderborn, F. Schöningh, 1913. 298 p. 8°.
1189. When corporal punishment for children is right: a story of personal experience. *Outlook*, 104: 523-26, July 5, 1913.

SCHOOL SANITATION AND HYGIENE.

1190. **Burks, Frances Williston and Burks, Jesse D.** Health and the school. A round table; with an introduction by F. M. McMurry. New York, Chicago, D. Appleton and company [1913] xviii, 393 p. illus. 12°.
"The present volume . . . accomplishes three things: From widely scattered sources it brings together the theoretical facts pertaining to health, that seem well established, and that are most valuable; it suggests how these facts have been applied, and to some extent, shows the extent of that application up to the present time; and it presents all this matter in a surprisingly simple and attractive manner."—Introd.
The material has been put in the form of conferences.
1191. **Cohn, Moritz.** Was trinkt das schulkind und was soll es trinken? *Archiv für pädagogik*, 1: 513-25, June 1913.
Investigations into what school children drink. Statistics from Breslau, where author is a school physician. Gives bibliography.

1192. **Gettkant, —**. Bedeutung und wert der schulärztlichen untersuchung an fortbildungsschulen. *Zeitschrift für schulgesundheitspflege*, 26: 289–304, no. 5, 1913.
 Writer concludes that results of inspection work in Berlin-Schöneberg show need for extension of medical inspection to continuation schools, regardless of expense. Careful statistics given.
1193. **Goodenough, Edward W.** Medical inspection of schools. *Bulletin of the American academy of medicine*, 14: 223–29, June 1913.
 Author urges education in practical sanitation and hygiene as a part of our educational system.
1194. **Grayson, Thomas W.** Open-air schools. *Bulletin of the American academy of medicine*, 14: 217–22, June 1913.
 Shows the surprising medical results of such schools.
1195. **Harrington, John W.** A new art in health exhibits. *World's work*, 26: 286–91, July 1913.
 Work of the American museum of natural history, New York city. Affords lectures on hygiene for high school students, etc.
1196. **Hartmann, Martin.** Abstinente schülervereine, insbesondere die *Germania*, abstinentenbund an deutschen schulen. *Pädagogisches archiv*, 55: 413–25, heft 7–8, 1913.
 Sums up the achievements of the vigorous temperance movement now under way in the German schools.
1197. **Loudon, B.** The physical condition of school children abroad. *Western Christian advocate*, 79: 10–11, July 16, 1913.
 Gives statistics, chiefly for Great Britain and Germany. Special evils are declared to be malnutrition in England and alcoholism in Germany.
1198. **Thiele, —**. Versuch einer biologie der schulanfänger. *Zeitschrift für schulgesundheitspflege*, 26: 377–87, no. 6, 1913.
 A study of 5,921 pupils just beginning school, in relation to family, illness, nutrition, etc.

SEX HYGIENE.

1199. **Cook, W. A.** The problem of sex education. *Journal of educational psychology*, 4: 263–60, May 1913.
 "A forceful arraignment of the biological method of approach to the sex question. The author thinks this is so devious that it misses the essential point in sex education."
1200. **Doell, Matthäus.** Die sexualpädagogik in ihrer beziehung zur schule. *Internationales archiv für schulhygiene*, 9: 1–36, no. 1, 1913.
 Includes a summary in English. "Sexual hygiene does not constitute a province per se, but forms an integral part of the general training. . . . The contribution of the school in this province can not be expected to exercise a permanent influence until a more wholesome tone prevails both in private and public life."
1201. **Melody, John W.** Instruction in sex hygiene. *Catholic university bulletin*, 19: 472–89, June 1913.
 The author does not favor sex instruction in the public schools.
1202. **Wilker, Karl.** Die stellung der höheren schulen zur aufklärung ihrer schüler über sexuelle fragen. *Zeitschrift für schulgesundheitspflege*, 26: 458–66, no. 7, 1913.
 Urges that secondary schools awake to the necessity of sex education among their pupils.

PHYSICAL TRAINING.

1203. **Curtis, Henry S.** The playground attendance and the playground director. *American city*, 9: 127–31, August 1913.
 Describes the activities and benefits of a supervised playground. How to find out what its actual service is.

1204. **McCurdy, J. H.** Twenty-five years' progress in physical education. Association seminar, 21: 342-54, June 1913.

Address given at the dedication of the McCurdy natatorium, April 29, 1913.

1205. The promise of American college athletics. Outlook, 104: 506-8, July 5, 1913.

1206. **Welpton, W. P.** Physical education; containing the chapters on physical education from "The principles and methods of physical education and hygiene". London, . B. Clive, 1913. 271 p. 16°.

SOCIAL ASPECTS OF EDUCATION.

1207. **Bagley, W. C.** Do the high schools need reconstruction for social ends? Religious education, 8: 176-83, June 1913.

1208. **Davis, Jesse B.** Social activities in the high school. Organizing and utilizing the social life of the students. Religious education, 8: 219-24, June 1913.

1209. **Key, Ellen.** Education for motherhood. Atlantic monthly, 112: 48-56, 191-97, July, August 1913.

Sets forth (p. 191-97) the writer's positive programme for educational reform in preparation for family life.

1210. **King, Irving.** Education for social efficiency; a study in the social relations of education. New York, Chicago, D. Appleton and company [1913] vii, 310 p. 12°.

1211. **Rapeer, Louis W.** Educational sociology. American education, 16: 480-87, June 1913.

"First chapter of a forthcoming book on Educational sociology."

CHILD WELFARE.

1212. **Benedict, A. J.** The well-fed child. Bulletin of the American academy of medicine, 14: 230-36, June 1913.

Contains some good material on school lunches.

1213. **Lindsey, Ben and Creel, George.** Do children toil? Good housekeeping, 57: 169-77, August 1913.

A popularly written article on child labor and its attendant evils, with criticism of the modern school curriculum.

MORAL AND RELIGIOUS EDUCATION.

1214. **Anderson, Stonewall.** The religious education of students in state institutions of higher learning. Bulletin of the Board of education of the Methodist Episcopal church, South, 3: 81-88, August 1913.

An address delivered at the Missionary conference, Waynesville, N. C., June 26, 1913.

1215. **Balliet, Thomas M.** The problem of moral education. Kindergarten review, 23: 609-14, June 1913.

"Abstract of address given at International kindergarten union convention, Washington, D. C."

1216. **Collins, William J.** The place of volition in education. International journal of ethics, 23: 379-96, July 1913.

Deprecates the too exclusive attention paid to merely physical and intellectual attainments. Training of volition toward high ideals advocated.

1217. **Cope, Henry F.** Ten years progress in religious education. Religious education, 8: 117-49, June 1913.

1218. **Frodsham, George H.** The religious education difficulty. Contemporary review, 104: 79-85, July 1913.

Describes conditions in England. Writer says: "A democratic solution of the religious education difficulty has been found in Australia in allowing the parent to decide for his own children what form, if any, religious instruction shall take."

1219. **Gazin, F.** L'enseignement de la morale dans les classes primaires. *Revue pédagogique*, 62: 501-14, April 1913.
1220. **Jones, Abel John.** Character in the making. London, J. Murray, 1913. viii, 144 p. 12°.
1221. **Lull, Herbert G.** Moral instruction through social intelligence. *American schoolmaster*, 6: 241-54, June 1913.
1222. **Mark, Harry Thiselton.** For childhood and youth; ideals of the modern Sunday school. London, J. Clarke & co., 1913. 190 p. 12°.
1223. **Marrinan, John J.** The children and religion. [Worcester, Mass., 1913] p. [229]-235. 8°.
Reprinted from the Pedagogical seminary, June 1913, vol. xx, pp. 229-35.
1224. **Noulet, Alfred.** Notre instruction morale et civique jugée par un allemand. *Revue pédagogique*, 62: 515-21, June 1913.
A review of *Der staatsbürgerliche unterricht in Frankreich*, by Dr. Paul Rühlmann.
1225. **Parker, Willis Allen.** Ethical training for public school pupils. *Religious education*, 8: 276-83, August 1913.
1226. **Sneath, Elias Hershey and Hodges, George.** Moral training in the school and home; a manual for teachers and parents. New York, The Macmillan company, 1913. vii, 221 p. 12°.
1227. **Sutton, William S.** Some principles of moral instruction. *Educational review*, 46: 1-9, June 1913.
Deals with psychology of the subject.
1228. The use of the Bible among schoolboys. The conclusions of a conference composed of headmasters and teachers in secondary schools, with others interested in religious work among schoolboys. New York, London, Association press, 1913. viii, 86 p. 12°.
This conference, which was largely attended, met in New York in May, 1912, at the call of a commission composed of representatives of eight prominent secondary schools, with David R. Porter, of the International committee of Young men's Christian associations, as secretary. The topics discussed were Purpose of Bible study, Curriculum Bible courses, Books available for curriculum courses, Use of the Scriptures in chapel services, Initiative of boys in Bible study, Methods and courses for voluntary study.

MANUAL AND VOCATIONAL TRAINING.

1229. **Aldrich, F. R.** Industrial education in the early nineteenth century. *Elementary school teacher*, 13: 478-84, June 1913.
Bibliography: p. 484-85.
Historical review.
1230. **Cooley, Edwin G.** Control of German industrial schools. *Elementary school teacher*, 13: 461-68, June 1913.
Discusses Dr. Roman's article in February number of *Elementary school teacher*. Cites his own investigations, and criticises Dr. Roman's strictures on the clerical aspect of the question in Germany.
1231. **Dean, Arthur D.** The new education: nature, the community and the home are to-day combining with the school to train children for an industrial democracy. *Craftsman*, 24: 463-71, August 1913.
Emphasizes a democracy of equality in educational opportunity.
1232. **Dyer, Henry.** Education and industrial training of boys and girls. London, [etc.] Blackie and son limited, 1913. 118 p. 16°.
Relates to conditions in Scotland.

1233. **Fish, E. H.** Revolution in school control. *Survey*, 30: 407, 423, June 21, 1913.

Author says "the vital, immediate reason for placing industrial education under separate lay boards of education lies in the fact that the old boards fail to control their schools in the spirit of the times." Describes conditions in Worcester, Mass. Discusses industrial education.

1234. **Glynn, Frank L.** Trade schools in the public school system. *American school board journal*, 47: 8, 55, August 1913.

Address before the Department of school administration, National education association, July 11, 1913.

Gives the plan of operation of the trade schools established three years ago at New Britain and Bridgeport, Conn., as experimental schools.

1235. The job hobo and the public schools. *Survey*, 30: 401-3, June 21, 1913.

Discusses various aspects of the problem of industrial education: Wisconsin system; lack of teachers; apprenticeship, etc. A review of an address by J. R. Commons before the Social service institute in Milwaukee, Wis.

1236. **Kerschensteiner, Georg Michael.** The idea of the industrial school, tr. from the German by Rudolf Pintner. New York, The Macmillan company, 1913. xi, 110 p. 12°.

1237. **Leake, Albert H.** Industrial education, its problems, methods and dangers. Boston and New York, Houghton Mifflin company [1913]. xi, 205, [1] p. incl. forms, diags. 8°. (Half-title: Hart, Schaffner & Marx prize essays, xv.) "List of authorities consulted": p. [196]-198.

1238. **Leavitt, Frank M.** Vocational guidance and the manual arts. *Manual training magazine*, 14: 423-30, June 1913.

Shows that there is "a close and vital relation between the much criticized manual arts courses and *vocational guidance*."

1239. **Miles, H. E.** Work and citizenship in Wisconsin. *Survey*, 30: 403-5, June 21, 1913.

Discusses the border line between education and work, showing what the state of Wisconsin is accomplishing in the way of industrial education.

1240. **Monroe, W. S.** On the meaning of "education for efficiency." *Kansas school magazine*, 2: 225-30, June 1913.

Claims that some writers use "Education for efficiency" as synonymous with vocational education. Believes that vocational education is desirable and should be encouraged, that it is vital to efficiency, but that there are other activities just as important that go to make up an efficient member of society.

1241. **Munroe, James P.** The business man and the high-school graduate. *Popular science monthly*, 83: 73-80, July 1913.

"For years and years everybody has been saying that the real work of the schools is to produce good citizens; but no one, broadly speaking, can be a good citizen unless he is an able producer and an intelligent consumer." Advocates vocational training.

1242. **Orth, Samuel P.** Germany: a model or a warning. *World's work*, 26: 315-21, July 1913.

Incidentally discusses the subject of industrial education as a basis of industrial efficiency.

1243. **Payne, E. George.** How industrial education is controlled in Germany. *Survey*, 30: 405-7, June 21, 1913.

In the main, discusses the nature of the control of industrial education in Germany.

1244. The present legal status of agricultural, domestic economy, and manual arts education in the United States. *Rural educator*, 2: 28-32, August 1913.

Gives the legal industrial education situation in 19 states of the Union and the District of Columbia, as this education pertains to our public schools. These statements have been prepared either by the heads of the Departments of education in the several states or by officials in these departments. The reports from the remaining states and territories will be published in the succeeding numbers of this journal.—From editor's note.

1245. **Richards, W. A.** Equipment for manual training shops. *American school board journal*, 47: 11-12, 66-67, July 1913.
1246. **Robins, Margaret D.** Industrial education. *Life and labor*, 3: 228-32, August 1913.
Review of women's work in the United States. Urges industrial education.
1247. **Roman, Frederick W.** Control of the industrial schools of Germany once more. *Elementary school teacher*, 13: 469-74, June 1913.
Says: "To argue for a two-board system in this country because of Germany's example, without giving the full causes for the separation, seems to me to be unfair to the American public."
1248. **Schultze, Ernst.** Working men's colleges. *Zeitschrift für philosophie und pädagogik*, 20: 405-18, July 1913.
Illustrates contemporary German interest in one of England's contributions to the popular education movement.
1249. **Scott, Jonathan F.** Economic reasons for vocational education. *Pedagogical seminary*, 20: 259-67, June 1913.
1250. **Selvidge, Robert W.** The culture elements in the manual arts. *Manual training magazine*, 14: 413-16, June 1913.
Advocates instruction in industrial methods and practices, as well as constructive problems, tool work and tool processes.
1251. **Snedden, David.** Vocational education. *Child-welfare magazine*, 7: 446-48, August 1913.
An address before the National congress of mothers, Boston, May 20, 1913.
1252. **Thomas, K.** Der werkunterricht. *Allgemeine deutsche lehrerzeitung*, 65: 313-16, July 4, 1913.
Discusses the manual principle of instruction as exemplified in the demands of German reformers.
1253. **Vaughn, S. J.** The moral significance of the vocational motive. *Education*, 33: 591-603, June 1913.
The vocational motive in connection with the school is declared to be "an intelligent desire to participate in the work of the world—such a desire as prompts an attitude toward the problems of the school similar to that held by the world's workers toward the problems and duties outside the schools."
1254. **Vogel, Paul.** Die arbeitsschule in der pädagogischen literatur des jahres 1912. *Archiv für pädagogik*, 1: 619-25, July 1913.
A review of the "work-school" literature of the year. Also in the current *Pädagogischer jahresbericht* (vol. 65, Leipzig, Brandstetter.)
1255. **Welpton, W. P.** Primary artisan education. London, New York [etc.] Longmans, Green and co., 1913. xix, 252 p. 12°.
The outcome of a "deep sense of the unfitness of the primary schooling of to-day to prepare the artisan boy for his work in life and his duty towards the nation." Outlines a proposed reorganization of the English primary school.
1256. **Wheeler, Charles G.** A manual training workshop built by grammar school pupils. *Manual training magazine*, 14: 417-22, June 1913.
Work of grammar school boys of Brunswick, Maine.
1257. **White, Frank R.** Industrial education in the Philippine Islands. [Peoria, Ill., Manual arts press, 1913] p. 265-77, 378-400. illus. 8°.
Reprint from *Vocational education*, March, May 1913.

TECHNICAL EDUCATION.

1258. **Hamilton, C.** Technical school organization and teaching; with a preface by G. Udny Yule. London, G. Routledge & sons, ltd., 1913. xii, 178 p. diagrs. 8°. (Half-title: *Broadway text-books of technology*, ed. by G. U. Yule.)

1259. **Magruder, William T.** The good engineering teacher, his personality and training. *Science*, 38:137-43, August 1, 1913.

Suggests strong courses of study in psychology and in education considered both as a science and as an art.

AGRICULTURAL EDUCATION.

1260. **Gray, Mary R.** The education of children in the school gardens of Los Angeles. *Craftsman*, 24:472-79, August 1913.

"Los Angeles blooms like the rose because 70,000 school children are doing real gardening both at school and at home." Shows what has been done in squalid districts, etc.

1261. **Main, Josiah.** Evolution of the high school course in agriculture. *School science and mathematics*, 13:508-16, June 1913.

HOME ECONOMICS.

1262. **Langworthy, C. F.** Home economics work in the United States for men and boys. *Journal of home economics*, 5:239-48, June 1913.

"Reprinted from the proceedings of the third annual meeting of the American association for study and prevention of infant mortality, 1912."

Describes instruction for men in this subject in the U. S. Military Academy and U. S. Naval Academy; in the Army and Navy training schools, and in the state agricultural colleges, etc.

1263. **Talbot, Marion.** The vocational and cultural value of domestic science. *Journal of home economics*, 5:231-36, June 1913.

MEDICAL EDUCATION.

1264. **American academy of medicine.** Report of committee on the teaching of hygiene and preventive medicine in medical schools. *Bulletin of the American academy of medicine*, 14:270-79, August 1913.

Answers received from 28 medical schools.

1265. **Hemenway, Henry B.** The desirability of teaching preventive medicine in the higher institutions of learning. *Bulletin of the American academy of medicine*, 14:210-16, June 1913.

1266. **Le Fevre, Egbert.** Some problems of medical education. *Science*, n. s. 37:847-56, June 6, 1913.

Emphasizes the overburdening of the clinical years, which has been due to adding topics or extending courses in the special branches. Only essentials can be taught thoroughly.

1267. **Stockbridge, Frank P.** Fewer and better doctors. *World's work*, 26:388-96, August 1913.

Shows what is being accomplished to advance medical education. Work of the American medical association.

EDUCATION OF WOMEN.

1268. **Association of collegiate alumnae.** Committee on vocational opportunities. Vocational training. A classified list of institutions training educated women for occupations other than teaching. Northampton, Mass., Press of Gazette printing co., 1913. 137 p. 12°. (Association of collegiate alumnae bulletin no. 1.)

Chairman of Committee: Elizabeth K. Adams, Smith college.

The list is arranged alphabetically by occupations, and by institutions and courses under each occupation. It is intended to be of practical service to college and high-school graduates seeking vocational training.

1269. **Hodgkins, Louise M.** The higher education of women in 1912. *Education*, 33:610-15, June 1913.

Reviews conditions throughout the civilized world, based upon questionnaires sent out to about thirty countries by the Association for women students in Leyden.

1270. **Sidgwick, Mrs. Eleanor Mildred (Balfour)** University education for women; presidential address delivered to the Education society, Manchester university, on 21st November, 1912. Manchester, University press, 1913. 22 p. 8°. (Manchester university lectures. no. 15.)
1271. **Sprengel, Auguste.** Bericht über die 23. hauptversammlung des deutschen vereins für das höhere mädchenschulwesen. Frauenbildung, 12:257-394, heft 6-7, 1913.
Proceedings of the meeting of the Deutscher verein für das höhere mädchenschulwesen at Halle, March 1913. Includes papers on many important school topics.
1272. **Thwing, Charles Franklin.** Letters from a father to his daughter entering college. New York, The Platt & Peck co. [1913] 75 p. 12°.
1273. **Women's municipal league of Boston. Education dept.** Handbook of opportunities for vocational training in Boston (regular college courses excepted). Foreword by David Snedden . . . comp. by Committee on opportunities for vocational training; ed. by Thomas C. McCracken, A. M. Boston, Mass. [Thomas Todd company, printers] 1913. 301 p. illus. 8°.
1274. **X . . . , Mme.** L'enseignement secondaire des jeunes filles en France. Revue internationale de l'enseignement, 63:388-97, May 1913.

EDUCATION OF SPECIAL CLASSES.

1275. **Potter, Frank H.** A school for bluejackets. Outlook, 104: 695-705, July 26, 1913.
Describes the educational work of the United States Navy. Illustrated by photographs taken on board the battleship Wyoming.
1276. **Weatherford, W. D.** The amazing progress of the negro race. Methodist review, 62: 509-21, July 1913.
Contains interesting material on the growth of negro education and schools.

EXCEPTIONAL CHILDREN.

1277. **Daly, Margaret A.** Physical training for the deaf child. Volta review, 15: 131-36, June 1913.
Among other measures advocates dancing as beneficial.
1278. **Dean, Arthur D.** Educating the institutional child: right labor as the great factor in developing youth. Craftsman, 24: 509-516, August 1913.
Shows what is being done at some of the great institutional schools of the country.
1279. **Nathan, Marcel, and others.** Les arriérés scolaires; conférences médico-pédagogiques, par le d^r Marcel Nathan ... et Henri Durot ... avec la collaboration de M. Gobron ... et de M. Friedel ... Paris F. Nathan, 1913. 360 p. illus. 8°.
1280. **Weigl, Franz.** Intelligenzprüfung von hilfsschülern nach der testmethode. Zeitschrift für kinderforschung, 18: 374-80, 455-62, June, July 1913.
Results of experiments in testing intelligence of auxiliary school pupils.

LIBRARIES AND READING.

1281. **Dracass, Carrie E. Tucker.** Some high-school library topics. Educational bi-monthly, 7: 411-34, June 1913.
Contains: 1. The use of the high-school library. 2. Report and recommendations made by the Committee. 3. The course of study in library economics for the Chicago high schools. 4. Some of the opportunities for library work in Chicago. 5. Summary of conditions in the Chicago high schools.

1282. **Legler, Henry E.** The world of print, and the world's work. *Library journal*, 38: 435-42, August 1913.

Address of the president, American library association, Kaaterskill conference, 1913. An appreciative survey of the practical results of the modern library movement.

1283. **Lowe, John A.** The relation of public and college libraries. *Library journal*, 38: 394-99, July 1913.

Read at a meeting of the Massachusetts Library club, Williams college, May 22, 1913.

PERIODICALS INDEXED IN THIS NUMBER.

- Akademische rundschau, Leipzig, Germany.
 Allgemeine deutsche lehrerzeitung, Leipzig, Germany.
 American academy of medicine. Bulletin. Easton, Pa.
 American city, 93 Nassau street, New York, N. Y.
 American education, 50 State street, Albany, N. Y.
 American journal of sociology, University of Chicago press, Chicago, Ill.
 American school board journal, 129 Michigan street, Milwaukee, Wis.
 American schoolmaster, State normal school, Ypsilanti, Mich.
 Archiv für pädagogik, Leipzig, Germany.
 Association seminar, Seminar publishing company, Springfield, Mass.
 Atlantic monthly, 4 Park street, Boston, Mass.
 Business America, 39 W. 32d street, New York, N. Y.
 Catholic educational review, Washington, D. C.
 Catholic university bulletin, Washington, D. C.
 Child-welfare magazine, 227 S. Sixth street, Philadelphia, Pa.
 Colorado school journal, 230 Railway Exchange building, Denver, Colo.
 Contemporary review, London, England.
 Craftsman, 41 W. 34th street, New York, N. Y.
 Education, 120 Boylston street, Boston, Mass.
 Educational bi-monthly, Board of education, Chicago, Ill.
 Educational review, Columbia university, New York, N. Y.
 Elementary school teacher, University of Chicago press, Chicago, Ill.
 English journal, University of Chicago press, Chicago, Ill.
 Frauenbildung, Leipzig, Germany.
 Good housekeeping, 381 Fourth avenue, New York, N. Y.
 History teacher's magazine, McKinley publishing company, Philadelphia, Pa.
 Humanistische gymnasium, Heidelberg, Germany.
 Independent, 119 W. 40th street, New York, N. Y.
 International journal of ethics, Philadelphia, Pa.
 Internationales archiv für schulhygiene, Munich, Germany.
 Journal of education, 6 Beacon street, Boston, Mass.
 Journal of educational psychology, Warwick & York, inc., Baltimore, Md.
 Journal of home economics, Roland Park branch, Baltimore, Md.
 Journal of race development, Worcester, Mass.
 Kansas school magazine, Emporia, Kans.
 Kindergarten-primary magazine, Manistee, Mich.
 Kindergarten review, Milton Bradley co., Springfield, Mass.
 Ladies' home journal, Curtis publishing company, Philadelphia, Pa.
 Library journal, 298 Broadway, New York, N. Y.
 Life and labor, 127 N. Dearborn street, Chicago, Ill.
 Manual training magazine, Manual arts press, Peoria, Ill.
 Mathematics teacher, 41 N. Queen street, Lancaster, Pa.

- Methodist Episcopal church, South. Board of education. Bulletin. 810 Broadway, Nashville, Tenn.
- Methodist review, 150 Fifth avenue, New York, N. Y.
- Missouri school journal, Jefferson City, Mo.
- Monatshefte für den naturwissenschaftlichen unterricht, Leipzig, Germany.
- Nebraska teacher, 1126-1128 Q street, Lincoln, Nebr.
- Neue bahnen, Leipzig, Germany.
- Normal instructor, Dansville, N. Y.
- Ohio educational monthly, 55 East Main street, Columbus, Ohio.
- Ohio teacher, Box 326, Athens, Ohio.
- Outlook, 287 4th avenue, New York, N. Y.
- Pädagogische warte, Leipzig, Germany.
- Pädagogische zeitung, Berlin, Germany.
- Pädagogisches archiv, Braunschweig, Germany.
- Pedagogical seminary, Worcester, Mass.
- Pittsburgh school bulletin, 1003 Bessemer building, Pittsburgh, Pa.
- Popular science monthly, Sub-station 84, New York, N. Y.
- Preussische jahrbücher, Berlin, Germany.
- Primary plans, Dansville, N. Y.
- Psychological clinic, Woodland avenue and 36th street, Philadelphia, Pa.
- Quarterly review, London, England.
- Religious education, 332 S. Michigan avenue, Chicago, Ill.
- Revue internationale de l'enseignement, Paris, France.
- Revue pédagogique, Paris, France.
- Revue universitaire, Paris, France.
- Rivista pedagogica, Rome, Italy.
- Rural educator, Ohio State university, Columbus, Ohio.
- School music, Keokuk, Iowa.
- School news and practical educator, Taylorville, Ill.
- School review, University of Chicago press, Chicago, Ill.
- School science and mathematics, Mount Morris, Ill.
- Science, Sub-station 84, New York, N. Y.
- Sierra educational news, 50 Main street, San Francisco, Cal.
- Storytellers' magazine, 27 W. 23d street, New York, N. Y.
- Survey, 105 E. 22d street, New York, N. Y.
- Texas school journal, 1927 Main street, Dallas, Tex.
- Virginia journal of education, Richmond, Va.
- Vocational education, Manual arts press, Peoria, Ill.
- Volta review, Volta bureau, Washington, D. C.
- Western Christian advocate, Cincinnati, Ohio.
- Western journal of education, 324 Phelan building, San Francisco, Cal.
- Western school journal, Topeka, Kans.
- Westminster review, London, England.
- World's work, Doubleday, Page & Co., Garden City, N. Y.
- World's work, London, England.
- Zeitschrift für kinderforschung, Langensalza, Germany.
- Zeitschrift für pädagogische psychologie, Leipzig, Germany.
- Zeitschrift für philosophie und pädagogik, Langensalza, Germany.
- Zeitschrift für schulgesundheitspflege, Leipzig, Germany.

TEACHERS' PENSION SYSTEMS IN GREAT BRITAIN

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,

Washington, September 23, 1913.

SIR: There is in the United States an increasing interest in pensions for teachers. In several cities and States some form of pension system has been adopted. Public opinion on this subject is, however, by no means unanimous. Many doubt the wisdom or justice of extending to one class of public servants a consideration and help withheld from another class. Others doubt the justice or economic wisdom of all pensions except for the unfortunate and helpless who would, without this form of help, be left to suffer in poverty or to become an unjust burden for relatives and friends. There is also doubt as to the justice of rewarding the few at the expense of the many, as must be the case when pensions are granted to those who have taught for a given number of years or who have reached a specified age, and are withheld from those who cease to teach before they have taught for the number of years given or have reached the age specified. All agree that those who have served their country faithfully and well, devoting to society, state, and humanity talents and energy which elsewhere might have brought them wealth, should not in their old age be allowed to suffer. It is also desirable that good teachers should be retained in the schools as long as possible, but there is doubt as to whether this can be brought about more certainly by a promise of a pension under conditions for them uncertain or by paying more adequately for services as they are rendered. Certainly there should be some easy way to retire those who have lived out their usefulness and to relieve the schools from the too common practice of pensioning them not only with funds paid in the form of salaries for services they can no longer render, but also with the time and opportunity of the children and the welfare of society and state.

In a matter about which there is so much uncertainty, any information based on actual experience can only be helpful. The accompanying manuscript gives a very complete and satisfactory account of the history and present status of teachers' pensions in Great Britain. I therefore recommend that it be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

PREFACE.

The study here presented is one section, expanded and adapted, of a general study of teachers' pensions and pension systems in the leading educational countries of the world, with evaluations, which the writer is making with hopes of completion in reasonable season. The facts that the documents and materials relating to teachers' pension systems in Great Britain are published in the English language and that these systems are especially unique and suggestive in certain important respects have led among other considerations to the early completion of this portion of the study and to its adaptation for immediate publication. The aim has been to present first of all in some detail the bare facts of development, organization, and scope, and secondly to analyze and evaluate in the light of modern principles of administration, economics, politics, and social science the chief of these facts, except such as may safely be left to speak for themselves. This second object has been pursued with special reference to conditions in the United States.

The writer's obligations to others are many. First of all, acknowledgments are due the various members of the staff of the Bryson Library, Teachers College, Columbia University, where much of the writing was done, for their invaluable assistance in gaining ready access to important materials needed in the prosecution of the research. Also sincere appreciation must be expressed for the constant and willing efforts of those in charge of other libraries at Columbia University and of the New York Public Library to place their resources at the writer's disposal. Moreover, the study in its present form would have been impossible without the unfailing cooperation through correspondence of the English Board of Education, the Scotch Education Department, the London County Council, and other public agencies connected with British education. Finally, especial pleasure is taken in expressing obligations to Dr. David Snedden, now State commissioner of education for Massachusetts, and to Dr. George D. Strayer, professor of educational administration, Teachers College, Columbia University, for suggestions and encouragement while the study was in the making.

R. W. S.

TEACHERS' PENSION SYSTEMS IN GREAT BRITAIN.

CHAPTER I.

INTRODUCTION.

Teachers' pensions and pension systems are one aspect of a universally developing movement among civilized peoples for decently disposing of the superannuated and disabled individual and robbing old age of its economic terrors. They are becoming practically worldwide. Pensions for public elementary teachers have existed in Germany in some form for two or three centuries and in other European countries for the better part of a century or more. At the present time teachers' pension systems are found in various stages of development throughout practically the whole of Europe and in other countries widely scattered over the globe. In a number of countries pensions are provided for teachers in all grades of schools. Pension systems in favor of teachers' widows and orphans are common in continental Europe.

In the United States teachers' pensions were essentially an unknown quantity until late in the nineteenth century, but during the past two decades they have sprung up here and there in nearly all parts of the country, and at the present time are spreading at a rapid rate. They began a few decades ago through the initiative of teachers themselves, as features of voluntary cooperative associations. Philanthropic enterprise has played some part, but it has been conspicuous only in the field of higher education, where it is at present practically the sole agency. The allusion here is of course to the Carnegie Foundation for the Advancement of Teaching, organized in 1905 and 1906, which maintains a system of liberal pensions for teachers in approved colleges and universities of the United States and Canada, and for the widows of such teachers. Beginning, however, with the establishment of a pension system for the public-school teachers of New York City in 1894, by action of the State legislature, the movement in the field of public education rapidly came to be based upon State legislative action. The first laws affected cities only, but a number of the later statutes have been general in their application. Some of the latter are positive or mandatory,

while others are merely permissive of local action. At the present time 10 States—Maryland, Rhode Island, Maine, New Jersey, Virginia, Wisconsin, New York, California, Massachusetts, and North Dakota—already have general pension laws of the mandatory type in favor of public-school teachers. New Jersey has two different laws of this kind operating independently. The laws in Maine, California, Massachusetts, and North Dakota were enacted in 1913. The acts in the three States first named in the list of ten and one in New Jersey are brief and simple, requiring no contributions from teachers. The other New Jersey law and those in the remaining States are relatively detailed and complex. All require contributions from teachers. The New York law does not apply to a number of local communities, including New York City, that were provided with local teachers' pension systems by State legislative authority at the time of its enactment. Arizona has a law, enacted in 1912, which authorizes the State board of education to retire public-school teachers on a pension under specified conditions. States having laws of general application permitting the establishment of local pension systems by local boards and communities are Pennsylvania, Ohio, Utah, and Vermont. Similar laws in California and Massachusetts were repealed in 1913. States having laws permitting the establishment of local pension systems in certain classes of school districts or cities are Kansas, Illinois, Oregon, Minnesota, and others. Cities having special teachers' pension systems by virtue of State legislative action have become quite numerous. The group includes New York, Chicago, Boston, Baltimore, Milwaukee, Detroit, Indianapolis, Charleston (S. C.), Buffalo, Louisville, New Orleans, Omaha, Denver, Rochester, Providence, Terre Haute, and some others. The most highly developed teachers' pension system in the United States is that of New York City, operating under provisions of the city charter.

The purpose of the present study is to present in some detail the experience of Great Britain in the pensioning of public-school teachers in the hope not only that this experience may prove of interest to teachers and others interested in education and social economics in America, but that it may also be found suggestive and valuable to those in any way concerned in the development of pensions for American public-school teachers. In any careful survey of teachers' pension systems in Great Britain a number of unique features are encountered that are both interesting and suggestive. Especially worthy of attention is the manner in which the recent comprehensive systems, particularly the present one in Scotland, have been formulated and controlled on the basis of actuarial science and advice. As a result these systems, especially that of Scotland, may be said to be standardized in a degree. They are therefore of much suggestive value for practice elsewhere.

The term "public school" in this study is understood in the American sense. The desire is to present the pension status of teachers in the schools of Great Britain which correspond to the fairly definite notion of public schools held in the United States, the schools of the great body of the people. Owing to certain differences between British and American education and educational terminology and the consequent danger of confusion, it is needful to define in some detail the precise scope and content of the term as used throughout the study.

In present authoritative usage in America the term "public school" signifies in general the following four different things in combination: (1) A school serving the educational needs of the masses of the people; (2) a school open to all classes and divisions of the population on equal terms; (3) a school owned and controlled by the public; and (4) a school providing free education. These four elements in our conception appear here in the general order of their development and essentiality. They really represent, roughly speaking, four successive stages in the development of the modern free public school in the leading countries of the world. In each stage the essential characteristics of the preceding ones have been retained. On the whole, education for the children of the masses of the population was first provided by schools established and maintained simply as philanthropic agencies in default of initiative and ability on the part of the people to provide for the education of their children at their own expense. In some cases the schools were free; in other cases fees were charged. Naturally the children of parents able to pay for their education could not gain admission to many of these schools on the same terms as the children of the poor. Moreover, these "charity schools" were sometimes closed to children from homes not subscribing to certain religious beliefs. On the whole, schools open to all classes on equal terms were a second development. In most and perhaps all countries of educational importance schools for the body of the common people, maintained and controlled by the public, developed more or less definitely from philanthropic schools. This stage of public action was reached early in Germany, Scotland, and New England, later in France and the major portion of the United States, and not until a comparatively recent date in England. A system of schools under public control was established by law in Scotland for the body of the people in 1696. This was the old parish-school system, closely associated with the State church, which remained in operation until 1872, when the present public-school system was inaugurated. In England and Wales all schools for the people were of the religious and philanthropic type until the enactment of the organic education act of 1870. In connection with increasing economic prosperity, free schools belonging to the public have been a natural out-

growth from such schools charging fees. Strictly public schools free to all are, with certain exceptions, a very recent phenomenon in educational history, and especially is this true with reference to Great Britain. However, not all free schools for the people in Great Britain belong to the public. There are in operation many such schools maintained by nonpublic, very generally religious, agencies, though they are decreasing in relative numbers. The schools of this class are survivals from the fairly recent period when strictly public schools did not exist or could not be provided in adequate numbers.

As indicated above, the primary element from the standpoints of both chronology and value in our conception of the public school is ministration to the educational needs of the masses of the people. This basic characteristic has been present in all the successive stages of development of the public school in Great Britain and elsewhere. Since the line of approach in the present study is historical, it is expedient to assign a meaning to the term "public school" which will include all its stages of evolution. The primary characteristic in question will serve this purpose admirably. Accordingly, for the general purposes of this study public schools are schools providing for the education of the masses of the people, and public-school teachers are teachers in charge of such schools. The same idea on the side of the school is conveyed by the much less common phrase "people's schools." This definition of public schools in terms of their primary function corresponds fairly closely as a matter of fact to English usage throughout the period covered by this study. Adherence to present American usage would rule out all schools and teachers in England and Wales prior to 1870 and many subsequent to that date really functioning as public schools and teachers for all practical purposes. It would also rule out many people's schools with their teachers in Scotland throughout the period considered. The caution is added, however, that the exigencies of terminology have occasionally required the use of the term public school in reference only to schools under public control. This usage, however, is usually quite apparent. The preceding definition plainly excludes colleges and universities, distinctively class schools, and private schools maintained for revenue. This last-named class of schools has been very numerous in Great Britain.¹ Normal schools should probably be excluded also, but the writer has somewhat arbitrarily considered the normal schools (training colleges) in Great Britain to belong to the public-school system or systems, because of their close organic connection with the public schools, because they have been largely of only secondary grade and have drawn most of their students from the common schools, and because normal-school teachers have

¹ Cf., e. g., *The Educational Systems of Great Britain and Ireland*, by Graham Balfour, 2d ed., p. 153.

been pensioned under the same provisions as public-school teachers proper.

The chief group of schools excluded from the public-school system in Great Britain by our somewhat arbitrary definition is the public and quasi-public class schools, or secondary schools as they are called, which largely parallel the public schools proper. Though some of these schools are under public management, especially in Scotland, most of them are quasi-public institutions. All, or practically all, charge tuition fees. Such schools are rare in the United States, but they are common throughout continental Europe. The nearest approach to them on the whole in our country is the private select schools, conducted for revenue, found chiefly in the larger cities of the East. The plane of cleavage between the people's schools and these class schools, in Great Britain as elsewhere, is vertical in the main. Roughly speaking, the two groups form two parallel systems, as already suggested. The public schools as above defined are the schools of the masses and the many, and the secondary schools tend to be those of the classes and the few. Education of both elementary and secondary grade in the American sense is provided in both groups, though the main emphasis is upon the former in the schools of the many, and upon the latter in the schools of the few. The basic difference is in the wealth and social rank of the parents as manifested in ability to pay tuition fees, rather than in the ability and advancement of the pupils. This cleavage is less marked in Great Britain than in France or Germany and is decreasing somewhat in degree at present, owing mainly to the common practice of awarding scholarships in secondary schools to promising youth of the working classes. There is little indication, however, that it will disappear.¹

As already stated, education of secondary as well as of elementary grade is provided in the public-school system of Great Britain. Schools of secondary grade have been included in Scotland in the group of public schools for a considerable time, and they are now comparatively numerous. Such schools have also been in existence for some time in England and Wales, but there they have been comparatively few in number. The schools in question consist chiefly of the group known in Scotland as higher grade schools and in England as higher elementary schools. These are people's high schools, corresponding to the higher primary schools of France. They provide advanced courses articulating with the ordinary elementary schools, as American high schools do. The standard course is three years in length. Legally and administratively, higher grade and higher elementary schools belong in the same field with the public

¹ Cf. *The Government of England*, by A. Lawrence Lowell, Vol. II, pp. 338-340, 342.

elementary schools, and their teachers have been pensioned regularly under the same regulations as elementary teachers. Without doubt there are other schools of secondary grade in Great Britain with a valid claim to be classed in this connection as public schools, but they are not numerous and are indistinguishable from the select schools in available statistics and reports. Moreover, except in Scotland since 1912, little has been done in the way of pensioning their teachers.

Pensions for teachers in the secondary or class schools of Great Britain are not treated in detail in this monograph; first, because such teachers have always been relatively few in number, and second, because provisions for pensioning secondary teachers have been relatively meager, except in Scotland since 1912.¹ A number of wealthy endowed secondary schools have for some time had individual pension systems of their own, operating under provisions of their respective schemes of government or charters, most of which were received under the endowed schools acts for England beginning in 1869² and the educational endowments act for Scotland of 1882.³ Also in a few cases secondary teachers in schools under public management have been pensioned by the local authorities. With the exception noted, however, there has been nothing remotely approaching any general provision of pensions for secondary teachers.

Although the matter of pensions for university teachers lies entirely outside the field of a study dealing with pensions for public-school teachers, yet a brief statement of the barest essentials respecting pensions for teachers in British universities may well be made. Certain of the constituent colleges of the ancient universities of Oxford and Cambridge provide retiring pensions for members of their respective instructional staffs. No general university pension system has been established at Oxford. At Cambridge a university pension fund and a special pension fund arising from a gift to the university, both of very modest proportions, have been available for a number of years. In 1912 a thoroughly substantial pension system was adopted in favor of professors, readers, and officers of the university, to take effect, however, at the discretion of the university senate only after certain changes in the university statutes had been secured.⁴ The four Scotch universities all maintain university pension funds of their own for the purpose of providing for their superannuated teachers.⁵ These funds have been in existence for some time. The distinguished

¹ See p. 55.

² The basic act was 32 and 33 Vict., ch. 56.

³ 45 and 46 Vict., ch. 59.

⁴ The information here presented was courteously supplied by correspondence, with excerpts from the statutes, by the university registries of Oxford and Cambridge.

⁵ Parliamentary Papers, 1910, vol. 72, 11, pp. 9-10; 65, p. 7; 281, pp. 6, 8; 148, p. 16.

scientist, Lord Kelvin, was on the pension roll of the University of Glasgow for a time prior to his death. All or practically all the modern municipal and provincial universities of England have recently established pension systems in favor of their own teachers.¹ In general these systems are of very small proportions, but they may be considered real beginnings. This group of institutions comprises the Universities of London, Liverpool, Manchester, Durham, Birmingham, Leeds, Bristol, and Sheffield.

¹ See Reports from Universities and University Colleges, etc., 1910, pp. xii, xvi.

CHAPTER II.

PENSIONS UNDER THE COMMITTEES OF COUNCIL ON EDUCATION.

Pensions for British public-school teachers were first inaugurated by the Committee of the Privy Council on Education, which was established by order in council in 1839 for the purpose of superintending the application of funds voted by Parliament in aid of public education. By administrative regulations this committee provided State pensions for such teachers on a small scale long before they were established by direct legislative action. The jurisdiction of the committee covered the whole of Great Britain.

The first action of the Committee of Council on Education relating to pensions was taken in 1846 as a means of educational improvement supplementary to the pupil-teacher system, which it introduced at the same time in recognition of the inadequacy of the prevalent monitorial system. In that year the following administrative minute was adopted:

[*Resolved*] That a retiring pension may be granted by the Committee of Council to any schoolmaster or schoolmistress who shall be rendered incapable by age or infirmity of continuing to teach a school efficiently.

Provided that no such pension shall be granted to any schoolmaster or schoolmistress who shall not have conducted a normal or elementary school for 15 years, during 7 at least of which such school shall have been under inspection.

That in all cases of application for pensions a report shall be required from the inspector, and from the trustees and managers of the schools, as to the character and conduct of the applicants, and the manner in which the education of the pupils under their charge has been carried on.

The amount of the pension shall be determined according to such report, but shall in no case exceed two-thirds of the average amount of the salary and emoluments annually received by the applicant during the period that the school has been under inspection.

A minute of the grant of every such pension, and of the grounds on which it has been awarded, shall be published in their Lordships' Minutes.¹

In 1851 a second administrative minute in the following form was adopted:

Resolved, That the foregoing minute [of 1846] be declared to have been intended to facilitate the appointment of competent successors in the place of meritorious but incapacitated teachers, whose removal might, by such assistance, be effected in a manner consistent with their claims on the public.

¹ Minutes of the Committee of Council on Education, 1846, Vol. I, pp 11-12.

That in order to define the extent of the charge to be created on the Parliamentary grant for education, the pensions to be awarded, pursuant to the minute of the 21st of December, 1846, be as follows:

20 pensions of £30 each.....	£600
100 pensions of £25 each.....	2, 500
150 pensions of £20 each.....	3, 000
Donations or special gratuities.....	400
	6, 500

That in order to give precedence to the most deserving cases, all applications for retiring pensions be collected for comparison, and decided according to their respective merits, not oftener than twice in each year, until the foregoing list be completed, and thenceforth only as vacancies in it shall occur.

That the pension be liable to be withdrawn on such proof as shall be satisfactory to their Lordships that the pensioner has been guilty of misconduct, or possesses sufficient means of livelihood from other sources.¹

The need for some effective means of facilitating the retirement of incapacitated elementary or public-school teachers was quite definitely felt in Great Britain at this time by the Committee of Council and others interested in education, and the inadequacy of the plan embodied in the preceding minutes was clearly recognized. For a number of years the committee had under its consideration various pension schemes of a comprehensive sort in an effort to find a practicable one which would really meet the need cited. Plans of pension systems supported by the beneficiaries were the only ones seriously considered. Not only were the funds at the disposal of the committee insufficient to permit it to maintain an extensive pension system, but the development of the civil status of the teacher, particularly in England and Wales, and of social, economic, and educational conditions was yet far from the stage where men are usually able to consider the maintenance at public expense of a thoroughgoing pension system for teachers quite compatible with sound public policy. It was realized by the committee that no scheme of the type considered would be satisfactory unless it involved compulsory membership and support on the part of all teachers of the class for which it was designed. Such compulsion was considered inexpedient under the existing conditions and traditions. Finally, in 1857 the committee gave up the attempt to formulate a satisfactory scheme of general application and decided to limit its operations to the very limited pension system established by the minutes quoted.² Doubtless the chief obstacle to the establishment of a general pension system, or local pension systems, for public-school teachers at this time, whether by order of the committee or by act of Parliament, was the civil status of the teachers. On the

¹ Minutes of the Committee of Council on Education, 1851-52, Vol. I, pp. 25-26.

² Ibid., 1857-58, pp. 30-31.

whole, they were but quasi-public servants, even in reference to their respective communities.¹ Pensions for regular civil servants were already fairly common,² but public opinion was unprepared to sanction the pensioning from State or local funds of any workers not directly in the employ of the public.

Certain principles of policy and rules of procedure for the administration of the parliamentary grants for public education were developed at different times which did not appear, at least explicitly, in the formal minutes of the committee. By means chiefly of official letters to inspectors and other persons published in the annual reports of the committee, such partially unformulated regulations were nevertheless made public to a considerable extent. Those of most importance were embodied in the official code adopted in 1860, the result of a codification of the minutes and regulations of the committee then in effect. The regulations thus developed in reference to pensions and formulated in the newly devised code of minutes and regulations were not numerous. All noteworthy additions to the pension minutes quoted above were contained in the following articles of the code:

164. Pensions are granted as a form of aid to schools, in order to facilitate the appointment of competent successors in the place of meritorious, but incapacitated, teachers. They are not eleemosynary, nor simply rewards of merit, nor can they be claimed as of right.³

168. Teachers who entered the profession before 1846 are regarded, *cæteris paribus*, as having the first claim.⁴

171. Pensions are liable to be withdrawn as often as they appear not to be needed for their object, as defined by Article 164.⁵

The eight articles of the code relating to pensions contain all the important provisions of the minutes of 1846 and 1851.

In 1861 a revision of the code of minutes and regulations was undertaken, and a revised code was adopted the next year. Through the revision the policy of paying all State subsidies in aid of elementary education direct to the managers of schools was established. In pursuance of this policy, not only were the customary provisions for grants to teachers in augmentation of salaries absent from the revised code, but likewise all pension provisions were suppressed. This latter action, however, was without prejudice to the validity of pensions already granted. The abolition in such fashion of the very modest pension system of the committee was seriously condemned then and since by many persons. The Government was charged with breach of faith and the violation of confidence inspired by it in

¹ See pp. 11-12.

² Cf. 4 and 5 William IV, ch. 24; 11 and 12 Vict., ch. 14; 20 and 21 Vict., ch. 37; 22 Vict., ch. 26; 22 and 23 Vict., ch. 32, sec. 8 ff.

³ Parliamentary Papers, 1860, vol. 53, 252, p. 23.

⁴ Ibid., p. 24.

⁵ Ibid.

a most deserving class of public servants. The offense, however, was really not flagrant, as indicated by the following excerpt from a circular letter of instructions from the committee addressed to "Her Majesty's Inspectors of Schools" in 1851:

You will not have failed to observe that by the minute of 21 December, 1846, their Lordships *take power, but do not pledge themselves*, to grant pensions of this nature. No such pension can be claimed as a right, under any circumstances whatever; and you will be careful to hold this language in all your communications upon the subject.¹

The committee regularly discouraged the building of large hopes upon the pension system, not only in their communications, but in the minutes and orders previously quoted and by a most conservative policy in awarding pensions. They early announced that the pensions were intended to be granted in the interest of particular schools in order to facilitate the retirement of incapacitated teachers. They declared that no pensions would be granted solely in the interest of teachers.² In 1859 the number of pensioners was only 26.³ In earlier years the number had been smaller still, very much smaller for the most part.

In 1870 was passed the education act for England and Wales⁴ which, despite supersedure in numerous respects by later acts, is still considered the fundamental educational law for these countries. While this act was silent regarding pensions for teachers, it contained other provisions which have some bearing upon later developments in this direction. Prior to this time, as has been indicated, public education was in the hands of religious and philanthropic associations, though partially supported by the State. The act in question provided for the establishment of elective school boards in all parishes and boroughs, or authorized combinations thereof, where adequate educational facilities for the masses of the people were not otherwise provided, or where the electors applied for the establishment of the same. Such boards were required to make provision for adequate school accommodations, and to that end were empowered to establish and maintain schools at public expense. Their powers were limited in a general way to the field of elementary education. Both board schools and voluntary schools, those not under public control, were to receive regular State aid, subject to compliance with the prescribed conditions. In short, the receipt of parliamentary aid in future was limited to schools classed as public elementary schools. These were defined to be schools in which the education given is principally elementary, with any religious instruction optional, in which the tuition fees do not exceed ninepence (18 cents) per week, which are freely open to State inspection, and which satisfy the con-

¹ Minutes of the Committee of Council, 1851-52, Vol. I, p. 27.

² Ibid.

³ Rep. of the Committee of Council on Education, 1858-59, p. xxxviii.

⁴ 33 and 34 Vict., ch. 75.

ditions laid down in the code of the Committee of Council for gaining annual parliamentary grants. Board schools were required to be public elementary schools.

A corresponding act for Scotland¹ was passed in 1872 and the existing public-school system of that country was decidedly improved and strengthened. The act authorized the establishment of the Committee of the Privy Council on Education in Scotland for administering the distribution there of parliamentary grants for education, though on the side of personnel the new Scotch committee was virtually identical with the English or old committee until 1885, when active control in the two was vested in separate ministers. The law established a school board in every parish and borough of the realm, with the obligation resting upon each of maintaining an adequate system of public schools. For this purpose the boards were empowered to impose local rates or taxes. Public schools were defined as schools under the management of school boards. Other schools efficiently contributing to the secular education of their respective parishes or boroughs, except those founded after the passage of the act and not definitely satisfying some special local need, were made eligible to receive parliamentary grants on the same terms as public schools. Though the powers of the school boards were not limited to the field of elementary education, as in England, the code of the new committee of council for Scotland established under the act shortly after its enactment provided that "in every school, or department of a school, in respect of which grants are made, the education given must consist chiefly of elementary instruction,"² and this provision was continuously retained in the code until recently.

In 1872 there was introduced into the House of Commons a bill for pensioning teachers which resulted in the appointment of a select committee of that house to inquire into the feasibility of granting retiring pensions to certificated elementary teachers "by a deduction from the parliamentary grant in aid of public elementary schools, or by any other like means." The committee submitted an instructive report,³ but was unable to make any positive recommendations. The announcement was made in the report that the committee had discovered the currency of a belief among many teachers that the minute of the Committee of Council of 1846 was "a promise of pensions to all teachers who fulfilled the conditions therein laid down" and the consequent currency of certain correlated expectations in the minds of some teachers.

As a result of these findings and of various petitions received at different times praying that the alleged promises of the early pension

¹ 35 and 36 Vict., ch. 62.

² Rep. of the Committee of Council, 1872-73, p. cl.

³ Parliamentary Papers, 1872, vol. 9, 344.

minutes be fulfilled, the Committees of Council on Education for England and Scotland, though still denying that any true promise had ever been made, jointly decided in 1875 to add the following provisions to their respective codes as an article thereof.¹ The term "certificated teacher" in the first article means here and throughout the study a person in possession of a teacher's certificate issued by the appropriate committee as a means of aid in standardizing the work of the people's schools for the purposes of the parliamentary grants.

A limited number of pensions will be granted, on the following conditions, to teachers who were employed in that capacity when [May 9, 1862] the minutes relating to pensions were canceled:

1. The proposed pensioner must—

- (a) Be a certificated teacher in a public elementary school, or training college, at the time when the pension is applied for.
- (b) Have become incapable, from age or infirmity, of continuing to teach a school efficiently.
- (c) Have been employed continuously, since the 9th of May, 1862, as principal or assistant teacher in elementary schools, or training colleges.
- (d) Be recommended by Her Majesty's Inspector, and the managers of the schools served in.
- (e) Be 60 years of age (if a man), or 55 (if a woman), unless the pension is applied for on the ground of failure of health.

2. Pensions will be granted to those teachers only who have been, during the seven years preceding the application on their behalf, in charge of schools under inspection, and are in need and deserving of such assistance.

3. Applications for a pension will be received only from the managers of the school in which the teacher is serving at the date of retirement.

4. These applications will be collected for decision, on their comparative merits, twice a year, about Lady Day and Michaelmas.

5. Teachers who entered on the charge of a school before 1851 will be regarded, *cæteris paribus*, as having the first claim.

6. The maximum number and value of pensions receivable at one time, in England and Scotland together, and including the pensions now current, will be as follows:

20 pensions of £30 each.....	£600
100 pensions of £25 each.....	2, 500
150 pensions of £20 each.....	3, 000
270.....	6, 100
Donations or special gratuities (each year).....	400
	6, 500

7. The pensions will be paid yearly, on certificates proving identity, good behavior, and continued need.

From these regulations it is clear that the action of the committees was to revive the former pension scheme with various modifications in the interest only of teachers who were in service at the time it was abolished. Though the two committees started thus on a common basis, differences soon began to appear in their pension regulations, especially after 1885, when they became in a real sense actually,

¹ Rep. of the Committee of Council (England and Wales), 1875-76, pp. 202-205.

as well as nominally, distinct. Both committees have regularly continued to embody their pension regulations in a single article of their respective codes.¹ The important changes made in the plan adopted will be noted in each case.

Until their final abolition in 1906, the regulations of the committee for England and Wales (Board of Education since 1900) continued to require continuous service in elementary education since May 9, 1862, as a general (but not absolute) condition of eligibility to a pension. Since 1893, however, teachers who were recognized students in training colleges on May 9, 1862, have not been debarred on the ground of nonemployment as a teacher at that time.² In 1894 the range of positions in elementary education which a teacher may have held since 1862, and might be holding at the time of application, was extended to include those of organizing teacher and of teacher in a central class for the instruction of pupil teachers.³ The committee for Scotland adhered to the same requirement as a like general condition of eligibility until 1899, when the date of the passage of the present fundamental education act for Scotland, August 6, 1872, was substituted in both places in the regulations for the date May 9, 1862.⁴ Owing to the difference in usage of the word "public" applied to schools, the Scotch committee early introduced the adjective "State-aided" as an alternative into the requirement relative to the class of school in which an applicant for a pension must be employed at the time of application.

The requirements of continuous service in elementary education in the pension provisions of the two codes at any given time have limited the pension benefits, prospective and actual, to a tolerably specific class of teachers which must constantly decrease so long as no changes were made in these requirements. As a matter of fact, this condition of continuous service has been instrumental in debarring far more teachers from eligibility than any other provision. Indeed, it alone has apparently been a sufficient disqualification in most cases. It would seem that relatively few teachers satisfying this condition have been debarred by the requirement of being certificated at the time of application for the pension. Aside from pupil teachers, about nine-tenths of the teachers in elementary schools under inspection in England and Wales, and practically all of those in such schools in Scotland, were certificated in 1875,⁵ and it is safe to say that most of those who were not certificated were

¹ This article has regularly appeared as a division by itself near the end of each code. The codes are published annually in pamphlet form. Those for other than recent years may be found in the annual reports of the committees.

² *Ibid.*, 1892-93, pp. 370-371. (Art. 130.)

³ *Ibid.*, 1893-94, pp. 390-391.

⁴ Rep. of the Committee of Council (Scotland), 1898-99, p. 187.

⁵ Rep. of the Committee of Council (England and Wales), 1875-76, pp. xiv, 235, 243; Rep. of Committee of Council (Scotland) 1875-76, pp. xi, 102, 106.

young teachers who had entered the service after 1862. Moreover, in 1875 the great majority of public or elementary schools in Great Britain were under inspection,¹ that is essentially to say, in receipt of parliamentary grants, and it seems quite reasonable to assume that a considerable proportion of teachers in uninspected schools who had been in continuous service for 13 years or more had become certificated. Teachers not employed in elementary schools in 1875 or any other year were of course by that fact permanently disqualified by the terms of the condition demanding continuous service. Some teachers uncertificated in 1875, but able to satisfy the requirement of continuous service, doubtless obtained certificates later. Finally, it must be observed that certification in Great Britain has in general meant certification during the remainder of the teacher's professional life. From these considerations the above inference relating to debarment by the requirement of certification seems well founded. The requirement that during the seven years preceding application for a pension teachers must have been employed in schools under inspection also has been no serious obstacle to the body of teachers meeting the one relative to continuous service. The small proportion of elementary schools not under inspection in 1875 decreased with the passage of time, seemingly to a very small figure.² The same is true of the requirement that teachers must be employed in public elementary schools, public or State-aided schools in Scotland, or in certain other comparatively few positions at the time of application, since as a matter of fact these schools have been practically identical with the class of inspected elementary schools, with certain others added in Scotland by strict interpretation of terms. This paragraph has not been complicated by the introduction of data and points of evidence respecting teachers in training colleges, because these teachers have always been numerically negligible in comparison with the great body of elementary teachers. The generalizations must hold, whether they are included or excluded.

In 1878 the committees eliminated the eleemosynary provisions of their pension regulations.³ This does not mean, however, that eleemosynary considerations in awarding pensions were ever entirely eliminated by either committee; for the number of pensions and the amount available for them have always remained definitely limited, and the provision, "applications will be collected for decision, on their comparative merits, twice a year," has always been retained unaltered in both codes.

¹ Cf. Rep. of Committee of Council (England and Wales) pp. vii-viii, xiii-xiv, and pp. v-vi, vii, respectively.

² Cf. Statistics of Elementary Day Schools, etc., issued by Board of Education, 1900-1901, p. 6. This publication appears in Parliamentary Papers, 1902, vol. 78,² (Cd. 1139).

³ Rep. of Committee of Council (England and Wales), 1877-78, p. 325; Rep. of Committee of Council (Scotland), 1877-78, p. 69.

The specifications relative to the number and aggregate amount of pensions remained unchanged in both codes till 1884, when the committees jointly added to the clause of their respective codes containing these specifications the following qualification: "But this limit of the number of pensions shall not affect the claims of teachers who were employed before August, 1851."¹ This action was doubtless taken because the minute of August, 1851,² fixed the first limit to the number of pensions, before the establishment of which all elementary or public-school teachers had fairly reasonable grounds to hope for a pension in due time. The English committee, it should be added, in 1893 extended the terms of this qualification to include teachers who were recognized students in training colleges at the time named.³

In 1886 the clause containing the specifications of the number and amount of pensions was again altered, but not identically, in both codes. In that year this clause in the English code was modified to provide that "the maximum number of pensions receivable at one time in England and Wales" should be 232 and the maximum value £5,580,⁴ and the corresponding clause in the Scotch code was changed so as to specify that "the maximum number and value of pensions receivable at one time in Scotland" should be 38 and £920, respectively.⁵ The maximum number and value of the pensions receivable in Great Britain at one time thus remained the same as before, 270 and £6,500. The sizes of the pensions remained £30, £25, and £20 in both codes. In fact no changes in this respect were ever made. In 1893 the preceding figures in the English code were raised to 453 and £10,580, respectively,⁶ and in 1894 those in the Scotch code were increased to 73 and £1,750, respectively.⁷ In the following year further changes were made in both codes. The figures in the English code were increased to 516 and £12,005,⁸ and the specifications in the Scotch code were changed to read as follows:⁹

The maximum number and value of pensions receivable at one time, in Scotland, will be as follows:

7 pensions of £30 each	£210
31 pensions of £25 each	775
45 pensions of £20 each	900
—	—
83	1,885
Donations and special gratuities (each year)	100
	—
	1,985

¹ Rep. of the Committee of Council (England and Wales), 1883-84, p. 147.

² See pp. 16-17.

³ Rep. of the Committee of Council (England and Wales), 1892-93, pp. 370-371.

⁴ Ibid., 1885-86, p. 147.

⁵ Rep. of the Committee of Council (Scotland), 1885-86, pp. 86-87.

⁶ Rep. of the Committee of Council (England and Wales), 1892-93, pp. 370-371.

⁷ Rep. of the Committee of Council (Scotland), 1893-94, pp. 90, 91.

⁸ Rep. of the Committee of Council (England and Wales), 1894-95, p. 389.

⁹ Rep. of the Committee of Council (Scotland), 1894-95, pp. 116-117.

The Scotch committee has retained these figures unaltered to the present time. From 1895 to 1900 the figures in the English code were increased every year. In 1900 the specifications were the following:¹

The maximum number and value of pensions receivable at one time, in England and Wales, will be as follows:

66 pensions of £30 each.....	£1, 980
363 pensions of £25 each.....	9, 075
518 pensions of £20 each.....	10, 360
—	—
947	21, 415
Donations or special gratuities (each year).....	340
	—
	21, 755

After 1900 no changes were made. These last figures remained intact so long as the pension regulations stood.

Since 1884, when the provision relative to teachers employed before August, 1851, was introduced, these limitations of number and amount have affected only those teachers who were not in service prior to that month. It would seem that all teachers satisfying properly the conditions imposed by the article on pensions who were in service prior to the month named have been awarded pensions on application. At any rate, since 1884 the number and value of the pensions in force have regularly been very considerably in excess of the limiting figures of the codes, as the statistics in the following paragraph indicate. Though the full number of pensions permitted by the figures of the codes were in effect at the time, about 200 additional pensions were awarded by the committees under the provision of 1884 within a year after its adoption.²

The expenditure for code pensions increased with some regularity in both England and Scotland until after the passage of the superannuation act of 1898.³ In 1899 there were in effect in England and Wales 219 pensions of £30, 668 of £25, and 732 of £20.⁴ The total annual expenditure for this purpose at that time was thus approximately £38,000. The total annual expenditure for Scotland at the same period was in the neighborhood of £5,500.⁵ Since the law of 1898 became operative the amount expended for code pensions in both England and Scotland has gradually decreased. No new pensions have been awarded in the former country since 1906.⁶ The distribution, number, and amount of code pensions in effect in Eng-

¹ Rep. of Board of Education, 1899-1900, Vol. III, p. 535.

² Rep. of the Committee of Council (England and Wales), 1884-85, p. xxxix.

³ See pp. 35 ff.

⁴ Rep. of the Committee of Council (England and Wales), 1898-99, p. xli.

⁵ Rep. of the Committee of Council (Scotland), 1898-99, p. 362; 1899-1900, p. 406.

⁶ See p. 26.

land and Wales at the end of September, 1911, are shown by the following table:¹

Size.	Number.			Total amount.
	Men.	Women.	Total.	
£30	70	35	105	£3,150
£25	158	203	361	9,025
£20	89	351	440	8,800
Total .	317	589	906	20,975

At the end of March, 1912, there were in effect in Scotland 24 pensions of £30, 51 of £25, 66 of £20, and 5 smaller pensions. Their total annual amount was £3,370.²

Shortly after the act of 1898 was passed a clause was introduced into each code debarring from eligibility to a pension under the code all teachers who had accepted that act in the manner prescribed therein³ except those proved to be unable to qualify for a pension under the new régime after such acceptance. As further adjustments to the act, provisions were also introduced into both codes requiring that applications for pensions should be made before the proposed pensioners attained the age of 65 years, or within a specified time thereafter, but making it possible for teachers of special fitness to secure the privilege of continuing their functions for a limited time after reaching that age.⁴

Beginning with 1900 the division on pensions of the English code regularly contained a statement to the effect that no applications for pensions filed later than March 31, 1906, would be considered. In 1906 the pension regulations were dropped from the code altogether. This action of course did not invalidate pensions already in effect.

¹ See Statistics of Public Education in England and Wales, 1910-1911-1912, Part II, p. 191.

² Rep. of the Committee of Council (Scotland), 1911-12, p. 30.

³ See p. 37.

⁴ Rep. of Committee of Council (England and Wales), 1898-99, p. 634; Rep. of Board of Education, 1900-1901, Vol. III, p. 178; Rep. of Committee of Council (Scotland), 1898-99, p. 131; *ibid.*, 1901-2, p. 215.

CHAPTER III.

PENSIONS BY VOLUNTARY AGENCIES.

There is comparatively little to record in relation to cooperative activities of British public-school teachers in the provision of pensions for themselves on their own initiative and responsibility. The only important activities of this nature have been conducted in connection with the National Union of Teachers, a large organization primarily of certificated public elementary teachers of England and Wales, founded in 1870, which concerns itself with forwarding a variety of teachers' interests. The membership of the union in 1910 was nearly 70,000.¹

One feature of this organization has been a fund known as the Benevolent and Orphan Fund, maintained by voluntary subscriptions and donations and serving various benevolent purposes. Its assets in 1912 were over £95,000. The membership of the fund has consisted of subscribers and donors, commonly but not necessarily members of the union or public-school teachers. One of the important activities of the fund has been the annual award by vote of the members and their representatives of a limited number of pensions to destitute and incapacitated teachers who have been regular subscribers during at least five years. Pensions have also been voted under varying conditions to teachers' widows. In general, pensions are not awarded to men under 55 years of age nor to women under 50. The maximum pension at present is £34 per year. The total number of pensioners in 1912, including teachers' widows, was 249. Of this number 54 were men. The total amount of the pensions was £5,826. The amount expended for all benevolent purposes the same year was £24,122.²

Another organization closely associated with the National Union of Teachers which is concerned in a small way with the matter of pensions is the Teachers' Provident Society, established in 1877. This organization is a teachers' friendly society registered under the Friendly Societies Acts. It is apparently the only registered teachers' friendly society in the country. The society has had a continuous, rapid, and prosperous development, especially during the past decade. In 1911 its assets amounted to over £530,000, and the total membership was more than 28,500. Though always in the minority previously,

¹ Ann. Rep., National Union of Teachers, 1911, pp. xxviii, liii.

² See Ann. Rep., Benevolent and Orphan Fund, 1911, pp. xl-xlvi; Agenda, Benevolent and Orphan Fund, 1912, pp. 14-15, 29.

women members have been in the majority since 1910. Only members of the National Union of Teachers, students in training, and pupil teachers are eligible to membership, except in the special State section described below. Teachers' pensions have been a relatively minor feature of the varied work of the society. Certain pension funds are maintained, however, and opportunity is thereby given members to purchase pension annuities on favorable terms. In 1911 these funds amounted to nearly £65,000. The number of pensioners was only 40 or 50, though it was increasing. Their annuities amounted to a total of £1,193. The maximum annuity has been £52.¹

In 1912 the Teachers' Provident Society was approved under the new national insurance law ² by the national insurance commissioners, and a special "State section" for the accommodation of the uncertificated and other teachers subject to health insurance under the law was established. This approval made the society with its branches an agency in the local administration of the insurance system, as described in a later connection.³ The State section is kept as distinct as possible from the remainder of the society, which has been but little affected by the introduction of the new branch of work. The financial administration of the latter is separate from that of the regular organization. The rules of eligibility have been essentially changed only with respect to the State section. The chief object of the new departure was to establish close relationships with many prospective members for the old or regular divisions of the society. Success in this aim has been achieved in a remarkable degree. Early in the present year (1913) about 50,000 teachers had already joined the State section.⁴

Health insurance under the new insurance act, with which the Teachers' Provident Society is now concerned, is of various sorts. Among the benefits provided are certain ones known as disablement benefits which may be regarded as disability pensions. The act applies to a very large number of teachers, chiefly those uncertificated. For special information, however, regarding the provisions of the law relating to teachers and teachers' pensions the reader is referred to chapter 6, where the chief of these provisions are presented.

¹ The chief sources of this varied information relative to the Teachers' Provident Society have been different annual reports and copies of the rules and tables of the society.

² 1 and 2 Geo. V, ch. 55.

³ Pp. 49-50.

⁴ Ann. Rep., Teachers' Provident Society, 1911, pp. 6-7; 1912, pp. 3, 5-6.

CHAPTER IV.

TENURE OF OFFICE.

Before proceeding to the consideration of the general provision of pensions for British public-school teachers by positive legislation, it is expedient to present an account of the stability of the profession in Great Britain, since this has important bearings upon the matter of pensions. These bearings are considered in the concluding chapter.¹ The discussion here will be confined to a presentation of the actual facts regarding the subject named.

The chief single factor in professional stability is the character of the teacher's tenure of office, and in general it may be said that the tenure of public-school teachers (and of teachers in general) in Great Britain has been relatively uncertain and indefinite, as in the United States. With the historical exception in Scotland noted below,² this has certainly been true so far as the rôle of law has been concerned. A law of 1841, applicable to both England and Scotland, enacted for the purpose of facilitating the conveyance of sites for schools for the education of the poor, provided that—

no Schoolmaster or Schoolmistress to be appointed to any School erected upon Land conveyed under the Powers of this Act shall be deemed to have acquired an Interest for Life by virtue of such Appointment, but shall, in default of any specific Engagement, hold his Office at the Discretion of the Trustees of the said School.³

The education act of 1870 for England and Wales⁴ directed that this provision of 1841 should—

extend to the case of any school provided by a school board, and of any master or mistress of such school, in the same manner as if the school board were the trustees or managers of the school—

under the conditions specified in the act of 1841.⁵

The act of 1870 also contained the following provision in point:

A school board may appoint necessary officers, including the teachers required for any school provided by such board, to hold office during the pleasure of the board, and may from time to time remove any of such officers.⁶

Both these provisions of 1870 are still in effect. Nothing was said in the law about tenure of office in voluntary schools. Tenure in

¹ See pp. 76 ff.

² See p. 30.

³ 4 and 5 Vict., ch. 38, sec. 17.

⁴ See p. 19.

⁵ 33 and 34 Vict., ch. 75, sec. 86.

⁶ *Ibid.*, sec. 35.

such schools depended upon the terms of the instruments of foundation of the different schools, but these were such as to make it very largely a matter of free arrangement between teachers and managers.¹ From a legal standpoint, tenure has been just about as uncertain in one class of schools as in the other. The Education Act, 1902,² introduced some small improvement by abolishing the local school boards and constituting the county councils, with the councils of the larger boroughs (incorporated towns and cities) and urban districts independent, as the local educational authorities throughout England and Wales, with the control in their hands of the dismissal of teachers in all public elementary schools, voluntary and provided, in their respective jurisdictions. This relative centralization of authority in respect to the function in question has tended to shield teachers from local prejudices and misjudgments and thus to make conditions somewhat more tolerable.

Prior to 1872 the teachers or masters of the parish schools of Scotland had enjoyed as great security of tenure as any body of teachers that has existed. Their positions carried the usual common-law tenure *ad vitam aut culpam* of public officers in Scotland,³ under which they could be dismissed only for grave breaches of professional or general conduct. By statute law they were subject to dismissal for positive neglect of duty, immorality, cruelty to children, and one or two other offenses, but as a rule they were shielded by the requirement of a formal trial and investigation.⁴ They were also shielded apparently by a general disinclination to enforce the statutory provisions. In any event mere incompetence was not sufficient ground for dismissal; nor was disability, except that after 1861 it was sufficient for compulsory retirement on a pension.⁵ In general the teacher who maintained himself in fair repute before men could retain his office till death. Whatever virtues it might have had, such security of position became provocative and protective of abuses, more or less serious, despite the safeguards provided. Not only was inefficiency due to incompetence and disability shielded more or less, but inefficiency due to willful neglect and indolence was fostered.⁶ Partly, at least, as a reaction against such evils, tenure *ad vitam aut culpam* was abolished by the act of 1872,⁷ except with respect to parish teachers in service at the time. Incompetence and inefficiency were added to the grounds upon which such "old" teachers might be

¹ See *The Law Relating to Schools and Teachers*, by T. A. Organ, pp. 267 ff.

² 2 Edw. VII, ch. 42.

³ Cf., e. g., *Manual of the Acts Relating to Education in Scotland*, by J. E. Graham, New Ed., p. 40, n. 1.

⁴ 43 Geo. III, ch. 54, sec. 20, 21; 24 and 25 Vict., ch. 107, sec. 13, 14, 19.

⁵ See pp. 51-52.

⁶ Cf. Rep. of Committee of Council on Education, 1862-63, pp. 155-156; Second Rep. by Her Majesty's Commissioners on Schools in Scotland (1867), pp. xxxii-xxxiii.

⁷ See p. 20.

dismissed.¹ The act provided, with reference to tenure for future teachers, that—

the right and duty to appoint teachers of public schools shall be in the respective school boards and every appointment shall be during the pleasure of the school board.²

The legal insecurity of tenure thus introduced was slightly tempered by an act of 1882,³ which provided that a certificated teacher could be dismissed only on the consent of a majority of the full membership of the board, and insured a measure of deliberation before the act of dismissal. The Education (Scotland) Act, 1908, opened to a teacher dismissed under the terms of the act of 1882 the right of appeal to the Scotch Education Department, which was authorized after investigation to ask the school board to reconsider its action, and in default of such reconsideration to require the board to pay the teacher an indemnity not exceeding one year's salary.⁴

In both England and Scotland teachers appointed to hold office during the pleasure of the board, without a term contract, have been entitled by common law to "reasonable notice" of dismissal, unless guilty of some grave breach of conduct. In practice three months has constituted the usual period of reasonable notice for head teachers and one month for assistant teachers. Term contracts between teachers and public-school authorities covering a definite period of time, such as are practically universal in the United States, are uncommon in Great Britain, if not illegal.

Of course in the absence of legal or State regulations it is possible for security of tenure to be provided for teachers to some extent by local regulations. So far as the writer has been able to ascertain, however, relatively little has been accomplished in this direction in Great Britain by local enactment. Certain local education authorities, as the London County Council, have formulated regulations regarding investigations, hearings, transfers, and the like designed to guard teachers against dismissal without sufficient grounds, and such regulations have undoubtedly improved the conditions of tenure in some degree, but the authorities retain the right to discharge teachers upon legal notice without reference to cause. Thus the following occurs in the educational regulations of the London County Council:

Appointments of head teachers are subject to three months' notice for their termination. The engagements of assistant teachers on supply are terminable without notice. The appointments of all other teachers in elementary schools who are in receipt of annual salaries are subject for their termination to one month's notice on either side.⁵

¹ 35 and 36 Vict., ch. 62, sec. 60.

² Ibid., sec. 55.

³ 45 and 46 Vict., ch. 18.

⁴ 8 Edw. VII, ch. 63, sec. 21.

⁵ Minutes of Proc., London County Council, 1911, Vol. I, Part I, p. 957, Part II, p. dcxlii.

Though appointments are classified in London and some other localities as permanent and temporary, these terms do not have the same rigid meanings as in France or Germany. A permanently appointed teacher in London, for example, is apparently simply a *regular* teacher who can not be dismissed without due notice. Nearly all London public-school teachers are permanent appointees in this sense.¹

Another important factor in professional stability is the matter of legal restrictions upon withdrawal from the profession in the form of provisions of law, civil-service regulations, and the like. In comparison with some other countries of Europe these have been of small importance in Great Britain. British public-school teachers, like those of America, are perfectly free to change their vocation at almost any time. They are entirely free at the end of any engagement with local authorities; and such engagements may generally be terminated on short notice, the same reasonable notice which school authorities may be required to give in cases of dismissal. The only important restraining influence of a legal nature is the requirement of a certain reasonable amount of service in order to gain eligibility to a pension on attaining a prescribed age.²

In the absence of legal requirements it is possible of course for security of tenure and professional stability in general to become firmly grounded in custom, but this has not occurred in Great Britain, as it certainly has not in the United States. Naturally there has been considerable shifting and change in the ranks of British public-school teachers, in and out of the profession and from one position to another. With respect to certificated teachers in England and Wales, considerable improvement on the side of tenure has gradually been brought about in recent decades by the National Union of Teachers through collective resistance and pressure. Under the existing circumstances, moreover, the tendency among teachers to voluntarily seek other fields of usefulness does not seem to be marked.

¹ Cf. Ann. Rep., London County Council, 1911, Vol. 4 (Education), pp. iii, n.; iv, n.

² See pp. 35, 55-56, 64.

CHAPTER V.

PENSIONS UNDER THE ACT OF 1898.

The obstacles in the way of the establishment of a satisfactory comprehensive pension system for teachers in the public or people's schools which were encountered by the committee of Council on Education in the sixth decade of the last century¹ gradually disappeared in a large measure as the century neared its close. Wealth became more abundant, the horror of measures involving socialistic tendencies decreased, and the status of the teacher became more and more that of a real public servant. As we have seen,² strictly public schools of elementary grade under the control of local school boards were introduced into England by the act of 1870, and the act of 1872 greatly strengthened the time-honored public-school system of Scotland by the establishment of local school boards throughout that country. The number of teachers in literally public or board schools in England and Wales increased gradually from zero in 1870 to 52,393 out of a total of 113,986 in inspected schools in 1900.³ The number of teachers in board schools of corresponding grade in Scotland increased from 2,698 out of a total of 3,940 in inspected schools in 1875, to 10,821 out of a total of 12,363 in inspected schools in 1900.⁴ Finally, by the provisions of the act of 1902 the teachers in all voluntary schools in England and Wales receiving parliamentary grants became largely public employees.

With the gradual disappearance of the obstacles cited, the matter of establishing a general pension system for public-school teachers began to be seriously considered. The consideration of the matter in the House of Commons in 1872 has already been noted.⁵ The Commissioners on the Elementary Education Acts, England and Wales, in their final report, issued in 1888, definitely expressed their approbation of a general superannuation system for elementary teachers. They suggested a system in outline which contained certain features that were later embodied in the act of 1898.⁶ A few years later a special committee of the House of Commons was

¹ See p. 17.

² Pp. 19-20.

³ Rep. of Board of Education, 1900-1901, Vol. II, pp. 418, 438.

⁴ Rep. of Committee of Council on Education in Scotland, 1875-76, p. 106; 1900-1901, pp. 412-413, 462.

⁵ See p. 20.

⁶ Parliamentary Papers, 1888, vol. 35, [c. 5485], pp. 83-84.

appointed to inquire into the best means of providing for the superannuation of public elementary teachers in England and Wales. The committee submitted its report in 1892, in which it presented and recommended a definitely formulated scheme which formed the basis quite largely of the system finally adopted in 1898.¹ The following paragraph is an especially important and significant passage of the report:

The evidence, together with a study of educational conditions, convince your committee that superannuation is necessary for the sake not only of the teachers, but of the schools. It is proved that after a certain age the teachers lose the vivacity needful for success, and that unless they can be superannuated they will be retained in positions which, despite their best exertions, they can not efficiently fill. The question thus becomes one of educational policy as well as of benevolence toward a body of public servants. In this body your committee include both men and women in voluntary schools and board schools. Your committee recognize the undesirability of granting any further aid from the State, however indirectly, to schools not under popular control; but as the State demands the same qualifications from all teachers alike, and as teachers are continually passing over from board schools to voluntary schools, and vice versa, your committee do not see that they can justly differentiate between them in the matter of superannuation.²

A unanimous resolution by the House of Commons the next year to the effect that in the opinion of the House it was desirable that a national State-aided pension system for teachers in public elementary schools in England and Wales should be established at an early date was a direct sequel to the report of this committee. Following the passage of the resolution, the minister of education (vice president of the Committee of Council on Education), with the concurrence of the Treasury, appointed a departmental committee to consider how effect should be given to it. The plan recommended in the report of 1892 formed the basis of the deliberations of the departmental committee, which presented its recommendations in 1894. It is a sufficient description here of the scheme proposed by this committee to state that the provisions of the act of 1898 conformed closely to it. The proposed scheme, however, did not contemplate pensions for Scottish teachers, whereas the law of 1898 applied to the whole of Great Britain.³

These deliberations within governmental circles upon the problem of a general pension system for public elementary teachers were largely a reflection of more or less continuous discussion and agitation of the matter in educational and other circles among the people. Much was done in favor of a pension system by teachers through the medium of their organizations and the educational press. The issue was argued pro and con in the newspapers and the periodical press.

¹ For this report entire, see Parliamentary Papers, 1892, vol. 12, p. 231.

² Ibid., p. iv.

³ Ibid, 1895, vol. 76, [c. 7636].

For a number of years prior to 1898 the great majority of teachers were quite ready to accept a partially contributory system, and public sentiment was rapidly crystallizing to the same purport. Parliamentary action was delayed by fiscal considerations for some time after the situation seems to have been reasonably ripe for it.

The Elementary School Teachers (Superannuation) Act, 1898,¹ is the instrument through which Parliament for the first time established State pensions for teachers. It took effect in 1899. Its essential provisions for present purposes can be most conveniently presented by quoting the act itself in somewhat abbreviated form. The term "Education Department," as used in the act, meant at the time of enactment essentially Committee of Council on Education, either for England or Scotland or both, but in reference to England and Wales it now means the Board of Education, which in 1900 replaced the English Education Department.² Following is the text of the law suitably abridged:³

Be it enacted as follows:

1. (1) A teacher certificated after the commencement of this act shall not be recognized by the Education Department as a certificated teacher until the department are satisfied in the prescribed manner of his physical capacity.
- (2) In the case of a teacher who becomes a certificated teacher after the commencement of the act, the following provisions shall, subject to rules under this act, apply:
 - (a) His certificate shall expire on his attaining the age of 65 years, or if the Education Department, on account of his special fitness, allow his service to continue for a further limited time, then on the expiration of that limited time;
 - (b) The teacher shall, while serving in recorded service, contribute to the deferred annuity fund under this act at the rate, if a man, of £3,⁴ and if a woman, of £2 ⁵ a year;
 - (c) On his attaining the age of 65 years, or on any later date at which his certificate expires, he shall be entitled, out of the deferred annuity fund, to such annuity for the remainder of his life in respect of his contributions to that fund as may be fixed by the tables under this act, but he shall not be entitled to any return of contributions or to any benefits in respect of his contributions other than that annuity;
 - (d) On his attaining the age of 65 years, or on any later date at which his certificate expires, if he has contributed to the deferred annuity fund in accordance with this act, and his years of recorded service are not less than half the number of years which have elapsed since he became certificated, the Treasury may grant to him, out of moneys provided by Parliament, an annual superannuation allowance calculated at the rate of 10s.⁶ for each complete year of recorded service.

¹ 61 and 62 Vict., ch. 57.

² 62 and 63 Vict., ch. 33.

³ The law appears in full in Rep. of Committee of Council on Education (England and Wales), 1898-99, pp. 513-518.

⁴ Now £3 12s. See p. 39.

⁵ Now £2 8s. See p. 39.

⁶ Now £1. See p. 39.

- (5) "Recorded service" for the purposes of this act shall be such service in the capacity of certificated teacher in a public elementary school, not being an evening school, as is recorded by the Education Department, and may include such service as is so recorded in the capacity, within the meaning of the Education Code, either of a teacher in a training college, or of organizing teacher, or of teacher of a central class for pupil teachers, or in such other capacity in or connected with public elementary schools as may be for the time being prescribed, or in the capacity of a certificated teacher in a certified reformatory or industrial school; but no service after the teacher attains the age of 65 years shall be recorded service for the purpose either of contribution to the deferred annuity fund, or of determining the amount of any allowance under this act.
2. (1) Where a teacher satisfies the Treasury in the prescribed manner that he—
- (a) Has served a number of years of recorded service not less than 10 and not less than half the years which have elapsed since he became certificated; and
 - (b) Has not at the date of application been for more than the prescribed time unemployed in recorded service; and
 - (c) Has become permanently incapable, owing to infirmity of mind or body, of being an efficient teacher in a public elementary school; and
 - (d) Is not excluded by the prescribed disqualifications;
- the Treasury may, subject to the prescribed conditions and to the provisions of this act, grant to such teacher out of moneys provided by Parliament an annual allowance (in this act called "a disablement allowance") not exceeding—
- (a) If the teacher is a man, £20 for 10 complete years of recorded service, with the addition of £1¹ for each complete additional year of recorded service; and
 - (b) If the teacher is a woman, £15 for 10 complete years of recorded service, with the addition of 13s. 4d.² for each complete additional year of recorded service; and
 - (c) In any case, the total annual sum which the teacher might obtain from an annuity and superannuation allowance under this act by continuing to serve until the age of 65 years.
- (2) If the grantee of a disablement allowance attains the age of 65 years, any annuity which would otherwise be payable to the grantee out of the deferred annuity fund shall, except where the allowance has ceased by reason of the grantee being again employed as a teacher in recorded service, be paid to the Treasury and applied as they direct toward the payment of disablement allowances, and, in that case, the Treasury shall not award any superannuation allowance to the grantee.
- (3) A disablement allowance shall be reconsidered by the Treasury at intervals not exceeding three years and the rules shall provide for the suspension, cessation, or reduction of the allowance in whole or in part, if the prescribed conditions are not complied with or the prescribed disqualifications apply, and those disqualifications shall deal with the cases of persons who have caused or increased their infirmity by their own misconduct or default, or who marry or cease to be incapable, or become in such a position as not to be in pecuniary need of the allowance.
3. (1) The contributions under this act from certificated teachers shall be paid to the Education Department at the prescribed time, and in the prescribed manner by the teachers or their employers; and the receipt of the Education Department for the amount of a contribution paid by the employer of a teacher shall be a good discharge for the like amount of remuneration otherwise payable to the teacher.

¹ Now £1 10s. See p. 39.

² Now £1. See p. 39.

- (2) The contributions so received by the Education Department shall be paid to the National Debt Commissioners, and be invested by them so as to form a fund, in this act referred to as "the deferred annuity fund."
- (3) The National Debt Commissioners shall pay out of the fund to the Treasury the sums required by the Treasury for the payment of annuities under this act, but otherwise shall invest the contributions, and all income of the fund for the time being, in any securities in which money held by the commissioners on account of savings banks may be invested.
- (4) Separate subsidiary funds shall be kept in respect of the contributions and annuities of men and women teachers respectively.
- (6) At the end of every seven years an actuarial inquiry into and report upon the assets and liabilities of the fund shall be made under the direction of the Treasury and the Education Department, and the report shall be laid before Parliament.
- (1) The Treasury shall cause tables to be constructed, showing the amount of annuity payable out of the deferred annuity fund to men and women teachers respectively in respect of the contributions made by them from time to time under this act, and so framed as to secure the fund against loss.
2. With respect to the application of this act to certificated teachers who became certificated before the commencement of this act (in this act referred to as "existing teachers"), the following provisions shall have effect:
- (1) The Education Department shall, in the prescribed manner, give to each existing teacher the option, within the prescribed time, not being more than one year after the commencement of this act, of accepting, in the prescribed manner, this act.
- (2) If an existing teacher does not so accept this act, it shall not apply to him. If an existing teacher does so accept this act, it shall apply to him with the following modifications; that is to say—
- (a) The rate of 10s.¹ upon which the superannuation allowance is calculated may be augmented in the case of a man by 3d., and in the case of a woman by 2d., for each complete year of recorded service served before the commencement of this act;
- (c) If the teacher has not at the date of the acceptance attained the said age [65], he must serve in recorded service after the commencement of this act, and where, during any part of the seven years next before the commencement of this act, he was not in recorded service, the duration of the recorded service after the commencement of this act must not be less than the said part of the seven years.
- (3) Nothing in this section shall authorize the grant of any allowance to any teacher who at the commencement of this act is in receipt of a pension out of moneys provided by Parliament for the service of education.
3. (1) The Treasury and the Education Department may make rules for carrying into effect this act, and shall provide thereby—
- (a) for permitting certificated teachers to pay contributions to the deferred annuity fund during any interval not exceeding six months in which they are not employed in recorded service, and for reckoning the time in respect of which such contributions are made, as if it were recorded service;
- (c) for the suspension of all or any part of an allowance when the grantee is wholly or partly maintained out of any public money.
- (2) All rules made under this section shall be laid, as soon as may be, before both Houses of Parliament.
7. Any question which arises as to the application of any section of this act to any person, or as to the amount of any annuity or allowance under this act, or as to the

¹ Now £1. See p. 39.

grant, refusal, suspension, or cessation of any such allowance, shall be referred to the Treasury, and any question as to the reckoning of any service for any purpose of this act shall be referred to the Education Department, and the decision of the Treasury or Education Department on any question so referred shall be final.

8. (2) Where the Education Department certify to the Treasury that a recipient of any superannuation allowance, or disablement allowance under this act, has been proved to them to have been guilty of any act or conduct which, if he had continued to serve as a teacher, would have justified them in suspending or canceling his certificate, the Treasury shall suspend or determine the allowance in whole or in part.
9. (2) Every assignment of or charge on, and every agreement to assign or charge, any annuity or allowance to a teacher under this act shall be void.
10. If any person—
 - (a) for the purpose of obtaining for himself or any other person any annuity or allowance under this act, personates any person, or makes any false certificate, false representation, or false statement, or makes use of any false certificate or document, false representation, or false statement, knowing the same to be false, he shall on conviction on indictment be liable to imprisonment, with or without hard labor, for a term not exceeding two years, and on summary conviction be liable to imprisonment, with or without hard labor, for a term not exceeding three months, or to a fine not exceeding £25.
11. In this act, unless the context otherwise requires—

The expression "certificated teacher" means a teacher who is recognized under the Education Code as a certificated teacher for public elementary schools;

The expression "certificate" includes any document issued by the Education Department which recognizes a teacher as a certificated teacher;

The expression "prescribed" means prescribed by rules under this act.
12. In the application of this act to Scotland, the following provisions shall have effect:
 - (1) The expression "Education Department" means the Scotch Education Department, and the expression "Education Code" means the Scotch Education Code.
 - (2) The expression "public elementary school" means a public or other school in receipt of annual parliamentary grant.
 - (6) It shall not be lawful for a school board in Scotland to grant under the powers conferred by section 61 of the Education (Scotland) Act, 1872,¹ a retiring allowance payable out of the school fund to any teacher of a public school under their management who has accepted this act in pursuance of the provisions of section 5 hereof, or to whom this act otherwise applies.
13. This act shall not extend to Ireland.
14. This act shall come into operation on the 1st day of April next after the passing thereof.
15. This act may be cited as the Elementary School Teachers' (Superannuation) Act, 1898.

This law remained in effect without change until 1912. In that year, however, it ceased to apply to Scotland on the occasion of the inauguration in that country of an entirely new State teachers' pension system,² much more liberal in its provisions, which is described in a subsequent chapter. Later in the same year the original act was amended so as to provide much more liberal pensions for teachers

¹ See p. 52.

² See p. 53.

in England and Wales also. The emendatory act ¹ fixed the rates of contribution to the deferred annuity fund at £3 12s. and £2 8s. per year for men and women respectively, and repealed certain parts of the original act, omitted in the preceding abridgment, authorizing the Treasury under certain conditions to vary the rates of contribution. Also, for teachers attaining the age of 65 years on or after April 1, 1912, it increased the superannuation allowance from 10s. to £1 for each complete year of recorded service, and for teachers applying for disablement allowances on or after the same date it increased these allowances in the case of men to £20 for 10 complete years of recorded service, plus £1 10s. for each additional year of such service, and in the case of women to £15 for 10 complete years of recorded service, plus £1 for each additional year. The conditions upon which these allowances must be granted were not changed, except for the provision in substance that a teacher attaining the age of 65 on or after April 1, 1912, who had formerly been in receipt of a disablement allowance should be eligible to an annuity and a superannuation allowance under the regular conditions regardless of whether the allowance was stopped by reason of reemployment in recorded service or for some other reason.

The rules authorized by section 6 of the preceding act of 1898 were formulated without delay for both England and Scotland by the Treasury in connection with the respective Committees of Council or Education Departments. They took effect on the same date with the law itself. The two sets of rules were essentially identical. They were not materially modified in substance, either uniformly or divergently, after taking effect. These rules have been statutory orders. As such they have the same validity as the law itself, so long as they stand. It is thus needful to present their chief provisions. The following account applies alike to both sets of rules unless the contrary is indicated.²

For the purpose of compliance with the requirements of section 1 (1) of the law the rules in 1911³ provided for the physical examination of all applicants for recognition as a certificated teacher at their own expense by medical officers nominated by the Education Department. A maximum fee of 10s. 6d. was prescribed. Satisfactory evidence of age was also required of every applicant. Existing teachers in 1899 were given a period of six months by the English rules and one year by the Scotch rules within which to accept the act after its

¹ 2 and 3 Geo. V, ch. 12.

² The original rules in full appear in Rep. of Committee of Council (England and Wales), 1898-99, pp. 519-529, and Rep. of Committee of Council (Scotland), 1898-99, pp. 217-227. For the rules in full with changes made, consult the latest Superannuation Pamphlets of the Board of Education and the Scotch Education Department. The Scotch rules, of course, became inoperative in 1912, when the law ceased to apply to Scotland.

³ As was stated, the provisions of the rules have been practically the same all along. The year 1911 is used here because it was the last one during which the Scotch rules were operative.

commencement. The former rules, however, gave the department authority to honor an acceptance made after six months and within one year if in its opinion there was reasonable cause for the delay. Existing teachers who accepted the act were subject to the requirement of furnishing satisfactory evidence of age.

Important regulations regarding contributions to the deferred annuity fund appeared in the rules in 1911 and earlier. The contributions of teachers in schools receiving State grants were required to be paid in the form of retents from salaries. The State authorities were directed to deduct the contributions due from such teachers from the annual grants paid to the managers of their respective schools and to transmit to the proper managers the receipt of the Education Department for each deduction made. Such receipt in the hands of the managers for the amount of a contribution has been by the terms of the law "a good discharge for the like amount of remuneration otherwise payable to the teacher." Teachers employed in recorded service outside of schools in receipt of State grants must pay their contributions directly to the Education Department. Such direct payments were also required to be made annually. If by failure to make the proper deduction, or by default of direct payment, a contribution was not paid when due, it must be paid later, but for the purpose of computing the annuity it was to be treated as having been paid on the day on which it was received. In accordance with section 6 (1) (a) teachers were permitted to pay contributions for any interval of six months or less between employments in recorded service. Any such interval for which contributions were paid was to be reckoned as recorded service.

It was prescribed that every annuity, allowance, or pension must be applied for. Application must be made to the Treasury through the Education Department. Every applicant must furnish the data and information required by the central authorities for passing upon his eligibility under the requirements of the law and for determining the annual sum due. Every applicant for a disablement allowance must also furnish satisfactory evidence on the points covered by certain disqualifications prescribed by the rules, but only authorized by the law itself.¹ These were as follows:

(1) A teacher shall be disqualified for the grant of an [disablement] allowance if he is not in pecuniary need of it, and shall be disqualified for a grant of part of an allowance if he is not in pecuniary need of that part.

(2) A teacher shall be disqualified for the grant of an allowance if his infirmity has been wholly caused by his own misconduct or default, and, if his infirmity, though not wholly so caused, has been increased by his own misconduct or default, shall be disqualified for the grant of such part of the allowance as the Treasury think fit.

(3) A teacher who is a woman and has married since her last employment in recorded service shall be disqualified for the grant of an allowance.

¹ Sec. 2 (1) (b) and (d).

(4) A teacher who has been out of recorded service for one year or longer at the time of application shall be disqualified for the grant of an allowance, save that exceptions may be permitted by the Treasury on the report of the Education Department in cases where they are satisfied there has been a sufficient cause for tardiness of application.¹

Part of the data and evidence demanded of applicants for a disablement allowance was required to be furnished by means of a medical examination, intended to determine whether or not the teacher had become permanently incapacitated through no fault of his own. Barring certain reasonable exceptions, every applicant must submit to such examination at his own expense by a medical officer chosen by the Education Department. The same maximum fee was prescribed as for the physical examination of a candidate for certification:

For the purposes of the periodical reconsiderations of disablement allowances by the Treasury, ordered by section 2 (3), each beneficiary was required to submit at intervals of three years, on pain of losing his allowance, satisfactory evidence that he was still qualified to receive the same. Moreover, any disablement allowance could be suspended, determined, or reduced at any time within an interval if the Treasury became satisfied that any of the qualifications relative to incapacity, pecuniary need, or celibacy had ceased to apply.

The rules in 1911 and before required the action of the Treasury upon applications to be communicated to the applicants through the Education Department. All authorized annuities, allowances, and pensions were payable in equal installments on the last days of March, June, September, and December of each year. No payment was to be made in any ease until any contributions yet due were fully paid. Responsibility for the making of payments was placed upon the Paymaster General, who was authorized to require at any time satisfactory evidence of the life and identity of a retired teacher before making any payment.

It is clearly evident that the benefits of the superannuation act of 1898 have not been freely open to all public-school teachers. They have been limited at any given time to certificated teachers in virtue only of employment defined as recorded service. The relative number of noncertificated teachers, however, has for some time been large. In 1908, for example, there were employed in the public elementary schools of England and Wales, including the few higher elementary schools that had been established, 64,846 noncertificated teachers out of a total teaching force of 156,372, exclusive of pupil teachers.² The corresponding figures for Scotland in 1907 were 2,793 and 17,704, respectively.³ It should be remarked, however,

¹ This last disqualification is given in substance, not verbatim.

² See Statistics of Public Education in England and Wales, 1907-8, Part I, pp. 29, 84, 88, 315, 334, 338.

³ Rep. of Committee of Council (Scotland), 1907-8, p. 642.

that very many of the noncertificated teachers were on the road to certification. Not only have certificated teachers in recorded service been favored by the act in the exclusive fashion indicated, but, barring "existing teachers" who failed to accept it, such teachers have been compulsorily subject to its provisions. There has been no escape from the burden of the contributions, though contributors have good assurance of the corresponding annuity. The specific service requirements conditioning the award of disablement and superannuation allowances have not applied in the case of the annuities. Barring certain ones who have received disablement allowances, every teacher who has legally contributed to the deferred annuity fund, however few or scattered the contributions, is entitled under the law to the annuity fixed by the tables of the Treasury on the sole condition that he survives till the age of 65, or till his certificate expires on a later date.

It will be observed that the act of 1898 does not require teachers in receipt of a superannuation allowance to remain out of the service. So far as the law itself or the rules are concerned, they may stay in the service and draw both salary and pension. By the terms of the law no teacher is eligible to a retiring pension until the date on which his certificate expires, it is true; but certification is not a prerequisite in Great Britain for the exercise of the teaching function, as we have seen. The framers of the legal regulations seem to have depended upon the Committees of Council to prevent the development of any serious abuses from these imperfections of the regulations. In order to count for the purposes of the distribution of the parliamentary grants it has been necessary for teachers of all classes to be "recognized" by the Education Department having jurisdiction.¹ For this reason managers have seldom felt they could afford to employ teachers not recognized. It was probably expected that the Education Departments would refuse to recognize a teacher as an uncertificated teacher whose certificate had expired under the law, since they were authorized to extend the validity of the certificate of any teacher capable of efficient service beyond the time of automatic expiration. At any rate, the possibility of serious abuses has been met in this manner. The writer received information in 1910 from both the Board of Education and the Scotch Education Department to the effect that teachers drawing superannuation allowances were not recognized for the purposes of apportioning State aid. The same attitude has probably been maintained toward teachers in receipt of an annuity without the superannuation allowance, though obviously all of the same arguments would not apply in such cases.

¹ Consult the codes for various years.

Within certain limits with a wide range between them, the act leaves the determination of what constitutes recorded service to the two Education Departments. Each inaugurated a liberal policy, and for a considerable time practically all service was recorded in both countries which could legally be so recognized. The Board of Education, however, in 1907 ceased to exercise its permissive powers in most cases, and decided to limit the recording of service to that rendered as a recognized certificated teacher in public elementary schools (which term was taken to include certified efficient schools and certified schools for various classes of defective children) and in certified reformatory and industrial schools, except with respect to persons already engaged in recorded service in other capacities. This action excluded future teachers employed in the training of teachers from the benefits of the superannuation system established by the law. Various considerations arising from changed educational conditions and organization prompted the board to take the step in question. Among the chief were the increasing difficulties and embarrassments involved in recording under the law the services of teachers engaged in the training of pupil teachers in secondary schools.¹ The policy of the Scotch Education Department in recording service followed the original lines so long as the law remained applicable to Scotland.

In accordance with section 4 (1) of the law the annuity tables reproduced on the following page² were constructed by authority of the Treasury on the basis of the experience available regarding rates of interest and mortality. The total annuity due a teacher on the attainment of eligibility is the sum of the small annuities purchased in the different years by the separate contributions. In accordance with a subsection of the law which was repealed in 1912,³ the Treasury has made several changes in the rates of contribution to the deferred annuity fund whereby most of the contributions, and hence most of the later annuities, were increased. The annual contribution required of men in 1911 was £3 10s. in both England and Scotland; that in effect for women the same year in England was £2 8s., while in Scotland the rate for women had remained unchanged.⁴

¹ Superannuation Pamphlet, issued by Board of Education, 1909, pp. 29-30.

² These tables appear in all editions of the Superannuation Pamphlet issued by either Education Department.

³ Cf. p. 39.

⁴ Superannuation Pamphlet (England and Wales), 1911, pp. 3, 25; Superannuation Pamphlet (Scotland), 1905, pp. 31-34.

Table of annuities payable quarterly to teachers from the deferred annuity fund after the attainment of the age of 65 years, or the later expiration of the teacher's certificate, in return for a contribution of £3 from a man and £2 from a woman at the specified ages.

Men.			Women.		
Age at which a contribution is treated as having been paid.	Amount of annuity for a contribution of £3.			Age at which a contribution is treated as having been paid.	Amount of annuity for a contribution of £2.
	£	s.	d.		s. d.
20 to 21 ¹ ..	1	13	8	20 to 21 ¹ ...	15 9
21 to 22...	1	12	9	21 to 22....	15 4
22 to 23...	1	11	9	22 to 23....	14 11
23 to 24...	1	10	10	23 to 24....	14 6
24 to 25...	1	9	11	24 to 25....	14 1
25 to 26...	1	9	0	25 to 26....	13 9
26 to 27...	1	8	1	26 to 27....	13 4
27 to 28...	1	7	3	27 to 28....	13 0
28 to 29...	1	6	5	28 to 29....	12 7
29 to 30...	1	5	7	29 to 30....	12 3
30 to 31...	1	4	9	30 to 31....	11 11
31 to 32...	1	3	11	31 to 32....	11 7
32 to 33...	1	3	2	32 to 33....	11 3
33 to 34...	1	2	5	33 to 34....	10 11
34 to 35...	1	1	8	34 to 35....	10 7
35 to 36...	1	0	11	35 to 36....	10 3
36 to 37...	1	0	3	36 to 37....	10 0
37 to 38...		19	6	37 to 38....	9 8
38 to 39...		18	10	38 to 39....	9 5
39 to 40...		18	2	39 to 40....	9 1
40 to 41...		17	6	40 to 41....	8 10
41 to 42...		16	11	41 to 42....	8 7
42 to 43...		16	3	42 to 43....	8 4
43 to 44...		15	8	43 to 44....	8 0
44 to 45...		15	1	44 to 45....	7 9
45 to 46...		14	6	45 to 46....	7 7
46 to 47...		13	11	46 to 47....	7 4
47 to 48...		13	5	47 to 48....	7 1
48 to 49...		12	10	48 to 49....	6 10
49 to 50...		12	4	49 to 50....	6 7
50 to 51...		11	10	50 to 51....	6 5
51 to 52...		11	4	51 to 52....	6 2
52 to 53...		10	10	52 to 53....	6 0
53 to 54...		10	5	53 to 54....	5 9
54 to 55...		9	11	54 to 55....	5 7
55 to 56...		9	6	55 to 56....	5 4
56 to 57...		9	1	56 to 57....	5 2
57 to 58...		8	8	57 to 58....	4 11
58 to 59...		8	3	58 to 59....	4 9
59 to 60...		7	10	59 to 60....	4 7
60 to 61...		7	6	60 to 61....	4 4
61 to 62...		7	2	61 to 62....	4 2
62 to 63...		6	9	62 to 63....	4 0
63 to 64...		6	5	63 to 64....	3 10
64 to 65...		6	1	64 to 65....	3 7

¹ That is, 20 years of age, but not exceeding 21, etc.

The first septennial actuarial inquiry under section 3 (6) was undertaken in 1906, and the report of the actuary was issued the next year.¹ The condition of the deferred annuity fund with reference to the future was pronounced unsatisfactory, owing to the fact that the mortality among the teachers contributing was found to be much lower than had evidently been expected when the annuity tables were constructed. It was further discovered that, on the whole, the rates of mortality for the different ages among the teachers were decidedly below what the normal rates for human beings taken at random are

¹ The report appears in Parliamentary Papers, 1908, vol. 83, 11.

judged to be. From the results of his investigation and such other actuarial experience as was available, the actuary drew up a tentative table of rates of mortality among men and women teachers of the class connected with the deferred annuity fund. An abridgment of the table with a change of title follows:

Mortality of teachers of the class connected with the deferred annuity fund.

Age.	Rate per cent of mortality.	
	Men.	Women.
20	0.263	0.270
25	.480	.315
30	.451	.320
35	.411	.325
40	.475	.343
45	.674	.476
50	1.009	.758
55	1.496	1.152
60	2.209	1.678
65	3.330	2.480
70	5.193	3.898
75	8.333	6.577
79	11.914	9.847

On the basis of the experience gained regarding mortality among the teachers and regarding the rate of interest accruing from the securities in which the accumulations of the fund were invested, the adoption of new annuity tables constructed along the lines indicated by the following scheme was suggested:

Exact age.	Men.			Women.	
	Annuity at age of 65 secured by a single payment of £3.			Annuity at age of 65 secured by a single payment of £2.	
	£	s.	d.	s.	d.
21.....	1	7	3	14	7
25.....	1	4	4	13	1
30.....	1	0	11	11	7
35.....		18	2	9	10
40.....		15	8	8	7
45.....		13	6	7	5
50.....		11	6	6	5
55.....		9	6	5	5
60.....		7	9	4	6

In 1911 the Treasury had not yet replaced or modified the original tables.

The first annuities paid from the deferred annuity fund under the superannuation act were necessarily very small, whereas the provisions of the law are such that the first disablement and superannuation allowances were of a goodly size. The annuities, however, have naturally been increasing in size from year to year. Moreover,

the number of annuitants and the number of contributors have steadily increased in England and Wales,¹ and the same was doubtless true in Scotland until 1912, when the act ceased to have effect there. On March 31, 1912, there were 1,294 men and 1,142 women annuitants in England and Wales. The total annual amount of their annuities was £3,804 and £2,165, respectively. During the year ending on the date named a total of £132,199 was contributed to the fund by men and a total of £172,770 by women in the whole of Great Britain. The total amount of the fund on the same date was approximately £3,540,000.²

The numbers of superannuation and of disablement allowances in effect have also increased consistently in England and Wales since the act became operative,³ and no doubt in Scotland until 1912. On March 31, 1912, there were 1,339 men and 1,151 women in England and Wales in receipt of superannuation allowances, the total annual amounts of which were £47,035 and £31,322, respectively. On the same date 500 men and 1,543 women were drawing disablement allowances amounting annually to £18,262 and £39,219, respectively.⁴ In Scotland on the same date of the preceding year, 192 men and 73 women were in receipt of superannuation allowances, the total annual amount of which was £8,530, and 71 men and 126 women were drawing disablement allowances amounting annually to £5,644.⁵

For some time after the act took effect the great majority of the teachers included in the pension system established were "existing teachers" who had accepted the act within the prescribed time. The inducements offered these teachers to accept were strong. The chief was the fact that service prior to the commencement of the act was to count as recorded service on the same basis as that rendered subsequently without involving any contributions to the deferred annuity fund in respect of it. Accordingly a large majority of the "existing teachers" of the entire country, 57,905 (26,725 men and 31,180 women) out of a total of 79,075 (30,524 men and 48,551 women), accepted the act.⁶ The total number of active teachers included in the pension system throughout Great Britain in 1911 was approximately 103,827, of whom some 34,660 were men. About 88,273 were employed in England and Wales.⁷ The entire number of course consisted of certificated teachers. It included such teachers in higher

¹ See Statistics of Public Education in England and Wales, 1903-4-5, pp. 155, 163; 1909-10-11, Part II, pp. 7, 16.

² Ibid., 1910-11-12, Part II, pp. 181, 190.

³ Ibid., 1903-4-5, pp. 154, 155; 1909-10-11; Part II, pp. 6, 7.

⁴ Ibid., 1910-11-12, Part II, pp. 180, 181.

⁵ Rep. of Committee of Council, 1911-12, p. 31.

⁶ See Rep. of Board of Education, 1899-1900, Vol. I, p. 12; Rep. of Committee of Council, 1899-1900, p. 24.

⁷ These figures were computed, by use of the known amounts of single contributions, from the statistics of receipts of the deferred annuity fund in Statistics of Public Education in England and Wales, 1909-10-11, Part II, p. 16.

elementary schools in England and Wales and higher grade schools in Scotland.¹ In 1911 there were only 47 of these people's secondary schools in England and Wales recognized by the State department (Board of Education),² while in Scotland the number reached a total of 196.³

The pensions of public-school teachers in Great Britain have been in no way dependent upon their salaries, save in Scotland since 1912.⁴ Nevertheless, it is desirable to present a brief account of the salaries of certificated teachers throughout the country in order that some comparison may be made between pensions received and the salaries of the beneficiaries while in service. Not only have certificated teachers made up the membership of the pension systems on the whole, but they have also constituted a large majority of the regular teaching body. Their salaries in the year 1911 appear in distributed form in the following table: ⁵

Salaries of certificated teachers in Great Britain in 1911.

Salaries.	England and Wales.		Scotland.		Total.	
	Men.	Women.	Men.	Women.	Men.	Women.
Less than £50.....	3	376	0	24	3	400
£50 to £100.....	4,832	37,000	349	10,987	5,181	47,987
£100 to £150.....	15,903	24,808	2,579	2,553	18,482	27,361
£150 to £200.....	7,925	3,825	1,221	108	9,146	3,933
£200 to £250.....	3,805	793	509	8	4,314	801
£250 to £300.....	1,024	210	218	0	1,242	210
£300 to £350.....	456	65	144	0	600	65
£350 to £400.....	127	0	89	0	216	0
£400 to £450.....	94	0	55	0	149	0
£450 to £500.....	2	0	13	0	15	0
£500 to £550.....	0	0	7	0	7	0
£550 to £600.....	1	0	3	0	4	0
£600 to £650.....	0	0	2	0	2	0

Over 2,000 teachers in Scotland, for the most part among those receiving the better salaries, were also provided with residences free of rent.

¹ See pp. 13-14.
² Statistics of Public Education, 1910-11, Part I, pp. 89, 355.
³ Return Showing (I) A List of Day Schools Aided from Parliamentary Grant, etc., (II) Summarized Statistics of Day Schools in Receipt of Annual Grants, etc., 1910-11, p. 119.
⁴ See p. 56.
⁵ The data from which the table was made appear in Statistics of Public Education in England and Wales, 1910-11-12, Part II, pp. 164, 167, 250, 253, and Return Showing (I) A List of Day Schools, etc., (II) Summarized Statistics of Day Schools, etc., 1910-11, p. 104.

CHAPTER VI.

DISABLEMENT PENSIONS UNDER THE NATIONAL INSURANCE ACT OF 1911.

The much-discussed national compulsory insurance law,¹ enacted by Parliament in the face of considerable opposition in 1911, came into operation in July, 1912. It corresponds to similar laws previously enacted in the German Empire, France, and other countries. The act provides for compulsory health and unemployment insurance for some 15,000,000 inhabitants of the United Kingdom employed in the service of others, to be maintained by contributions in specified proportions from the beneficiaries, their employers, and the State. The health insurance is also voluntary for perhaps 2,000,000 or more others. Provision is made for the general administration of the health insurance by bodies of insurance commissioners appointed separately for the four chief divisions of the United Kingdom, viz, England, Scotland, Wales, and Ireland. The national Board of Trade is made responsible for the general administration of the unemployment insurance.

Our interest in the new insurance act comes from the fact that, subject to the general limitations prescribed, the requirements of health insurance apply compulsorily to public-school teachers in Great Britain who are not subject to the teachers' pension act of 1898 or to the new superannuation scheme in Scotland described in the following chapter, and voluntarily to other teachers, coupled with the further fact that certain of the benefits derived from the health insurance may be considered disability pensions. The general limitations mentioned restrict the application of the compulsory provisions to persons whose annual wage or salary does not exceed £160, unless employed in manual labor, and who do not furnish satisfactory proof that they are in receipt of an annual income not dependent upon their personal exertions to the amount of at least £26 and the application of the voluntary provisions to persons whose total annual income does not exceed £160. Moreover, the provisions for health insurance cease to apply when persons reach the age of 70 years. The teachers to whom the provisions compulsorily apply include practically all uncertificated teachers and all teachers in England and Wales with salary and other conditions within the specified limits who were certificated in 1899, but did not accept the act of 1898. The writer

¹ 1 and 2 Geo. V, ch. 55.

has no means of determining exactly the number of teachers compulsorily subject to health insurance, but it is not very far from 85,000.¹ No reliable data of any sort are available concerning the number who have insured voluntarily.

The normal assessments levied upon teachers and others compulsorily subject to health insurance are 4d. and 3d. per week for men and women, respectively. These amounts are required to be paid by employers, along with their own contributions of 3d. per week for each employee, and retained from wages or salary. The contributions of the State are 2d. and 3d. per week for men and women, respectively. The contributions for voluntary insurance vary with age according to a table which the insurance commissioners are directed to prepare. The benefits to which insured persons are entitled under the prescribed conditions include among others sickness benefits and disablement benefits. A sickness benefit is a weekly payment for a maximum period of six months during incapacity for work on account of disease or other bodily or mental disability. The normal weekly rate is 10s. in the case of men and 7½s. in the case of women. A disablement benefit is a pension normally equal to 5s. weekly, beginning on the termination of a sickness benefit and continuing so long as the incapacity for work continues, except that it must cease at the age of 70. A period of two years of health insurance is a condition of eligibility to a disablement benefit or pension, and consequently no such benefits have yet been awarded.

Persons may comply with the provisions relative to health insurance through membership in a friendly society approved by the insurance commissioners. Societies so approved have power to make regulations with the consent of the commissioners for local administration of certain aspects of the insurance, including sickness and disablement insurance, among its membership. These rules may cover the matters of proof of eligibility, distribution of benefits, behavior while in receipt of same, penalties for violations of regulations, etc. Approved societies for their own purposes may even substitute other provisions for those relating to sickness and disablement insurance, provided the insurance commissioners are satisfied the substitute provisions are fully equivalent in value to the regular ones and give their consent. The collection of the contributions from employers is under the control of the insurance commissioners. Each society is a financial unit, though the funds of all societies are largely administered by the commissioners under the law. Persons not joining approved societies are subject to the disadvantage of having benefits interrupted whenever the amount standing to their credit in the special State fund provided for them is exhausted, though in case of permanent removal

¹ Ann. Rep., Teachers' Provident Society, 1911, p. 6.

from the United Kingdom or in case of death about half the amount standing to their credit is returnable to them or their proper representatives. Nearly all insured persons are members of approved societies. As previously noted,¹ large numbers of teachers have been joining the new State section of the Teachers' Provident Society, which is an approved society under the law.

Finally, it should be noticed that when an uncertificated teacher employed in a public school becomes certificated and subject to the act of 1898 or the new pension scheme in Scotland, and thus ceases to be subject to compulsory health insurance, an amount equal to the value calculated in the prescribed manner of his past contributions for health insurance since his first employment in a public school must be paid from the appropriate source into the deferred annuity fund of the act of 1898, or into the new superannuation fund in Scotland,² and regularly placed to his credit there, provided always he does not continue insurance in a voluntary capacity.

¹ See p. 28.

² See p. 55.

CHAPTER VII.

SEPARATE PENSION SYSTEMS IN SCOTLAND.

On the whole, Scotland has been in advance of England and Wales in the matter of pensioning teachers. There have been certain pension systems limited to Scotland alone which it has seemed best to treat in a separate chapter. These, particularly the one lately established, have possessed some more or less unique features.

In 1861, by the agency of the Parochial and Burgh Schoolmasters (Scotland) Act,¹ Parliament established a pension system affecting teachers of the parish schools of Scotland.² The pension provisions of this act constituted the first direct legislation on teachers' pensions in Great Britain. The parish schools mentioned were the public or people's schools originally established in 1696.³ The teachers, practically all men, were primarily elementary teachers, though some of them also gave instruction of secondary grade. They constituted in 1861 probably only about one-third of the elementary teachers of the country engaged in public schools in the broad sense of the term, owing to a great multiplicity at that time of denominational, philanthropic, and some other nonparish schools belonging to that class.⁴

The security of tenure of the parish teachers of Scotland and the various types of inefficiency fostered by it have been presented in a preceding connection.⁵ While it was possible, but not easy, to remove teachers culpably inefficient, those who were incompetent or inefficient through no fault of their own could not be dismissed. In the face of this situation, the custom of pensioning incapacitated and superannuated teachers by mutual agreement developed to an extent which can not now be definitely determined.⁶ The school authorities of a parish suffering from the inefficiency of such a teacher simply drove a bargain with him for the surrender of his office in consideration of a pension. As a means of relief the law of 1861 established regulations for the compulsory retirement of aged and infirm masters. The pension system introduced by the law was complementary to these regulations. The authorities, the heritors and minister, of any parish were authorized to permit or to require the

¹ 24 and 25 Vict., ch. 107.

² What might be called another system was also established affecting only the relatively few teachers of supplementary or "side" schools, but it is quite unimportant for our purposes.

³ See p. 11.

⁴ Cf. Second Rep. by Her Majesty's Commissioners on Schools in Scotland, (1867), appendix, p. 24.

⁵ See p. 30.

⁶ Cf. 24 and 25 Vict., ch. 107, sec. 8, 18.

retirement of the parish schoolmaster on the occasion of a judgment against him of inefficiency due to infirmity or age made in a report to the authorities on their application by one of the State inspectors of schools with the concurrence of the presbytery. In case the removal was not occasioned by any fault of the master, the heritors and minister were required to grant him a pension for life, ranging at their discretion from two-thirds of his salary at the time of retirement to the full amount of such salary plus a sum equal to the rental value of the house and garden assigned to him as schoolmaster. The law also transferred to the school authorities the right to dismiss a master for neglect of duty (but not for immorality or cruelty),¹ under the requirement that such dismissal be made by the same form of procedure as retirement, and gave them the option in such cases to grant a pension of such amount as they might choose. The value of these very commendable provisions of the law was much curtailed by practical difficulties of execution and a general reluctance in undertaking to expel a teacher from office. The most valuable effect seems to have been in facilitating retirements on a pension by mutual agreement between authorities and teacher. Teachers were naturally loath to have legal proceedings instituted.²

The act of 1872³ repealed the law of 1861 in toto, but it conserved all pension rights which teachers in service at the time had received under the latter act. It substituted the following simple and purely permissive provision for the pension regulations repealed:

A school board may permit any teacher of a public school to resign his office upon the condition of receiving a retiring allowance, and the said board may award and pay to such teacher out of the school fund such retiring allowance as they shall think fit.⁴

This power was withdrawn by the pension law of 1898,⁵ except with respect to "existing teachers" who did not accept that act; but it was expressly revived by the Scotch education act of 1908.⁶ School boards have taken some advantage of this express permission of 1872 to grant retiring allowances, but how extensively the practice has prevailed the writer is unable to state. No statistics on the matter are available. For the three years and more extending from January 1, 1909, to the date when the present superannuation scheme took effect, the Scotch Education Department had authority, by the terms of the education act of 1908,⁷ to make annual grants to school boards, and to the managers of certain schools not strictly public

¹ Cf. p. 30.

² Second Rep. by Her Majesty's Commissioners on Schools in Scotland, pp. xxxii-xxxiii, lxxlii-lxxiv; Rep. of the Committee of Council, 1862-63, pp. 155-156.

³ See p. 20.

⁴ 35 and 36 Vict., ch. 62, sec. 61.

⁵ Sec. 12 (6).

⁶ 8 Edw. VII, ch. 63, sec. 12 (1).

⁷ Sec. 13.

upon whom the act conferred the same rights of granting retiring allowances,¹ in aid of pensions granted by them under the provisions cited. The grant in respect of any pension could not exceed one-half the amount thereof. This provision covered retiring allowances awarded both before and after the commencement of the act. It is operative now only in respect of retired teachers not included in the present pension system.

But most important of all, the Scotch education act of 1908 made provision for the establishment on a scientific basis of a much more liberal, thoroughgoing, and progressive pension system for Scottish teachers than any previously projected in Great Britain.² The Scotch Education Department was directed to prepare on actuarial advice as soon as feasible a new superannuation scheme applicable to such teachers as should be prescribed therein. Certain provisions of the scheme were prescribed by the law, but all others were left to be supplied entirely by the department. The department was directed to publish a tentative draft scheme, to circulate it among school authorities and others interested throughout the country, to receive objections to it and proposed amendments for a period of three months, and finally to consider such objections and amendments as a basis of further procedure. Following are the essential provisions of the law for the subsequent adoption of the scheme. They throw an interesting light upon British legislative methods.

Thereafter it shall be lawful for the department to make and issue a teachers' superannuation scheme in accordance with the said draft scheme or a modification thereof: *Provided*, That such scheme shall be forthwith laid before both Houses of Parliament, and, if neither House of Parliament within three months, exclusive of any period of prorogation, after a scheme has been laid before it presents an address praying the King to withhold his assent from such scheme or any part thereof, it shall be lawful for the King in Council by Order to approve the same or any part thereof to which such address does not relate.³

Any scheme approved by Order in Council under this section shall be of the same force as if it were enacted in this act.⁴

A superannuation scheme prepared in accordance with the requirements of the law was duly adopted and put into operation on April 1, 1912, when by the terms of the law⁵ the superannuation act of 1898 ceased to apply to Scotland. The teachers' pension system thus inaugurated is to a very unusual extent a scientifically framed system, however far it may be from perfection. It therefore merits careful study as a suggestive basis for procedure in the United States and elsewhere. The scheme was formulated under the guidance of two competent actuaries, who secured and utilized for the purpose a large mass of actuarial data relating to Scottish and a relatively few English teachers.

¹ Sec. 12 (2).
² *Ibid.*, sec. 14.

³ Sec. 14 (12).
⁴ Sec. 14 (14).

⁵ Sec. 14 (6).

Altogether the investigations covered 26,513 cases. While the data were decidedly inadequate in some respects, the actuaries consider the scheme adopted to be fairly sound and safe on the whole from an actuarial standpoint. The probability of a need of modification in some respects on the basis of future experience is freely admitted, however.¹

The new superannuation scheme² provides for the payment of pensions to retired Scottish teachers who at the time of commencement of the scheme were in receipt of a superannuation or disablement allowance under the act of 1898 or of a pension from a school board or the managers of any school in receipt of grants from the department. No such pension may exceed the pension, if any, which would have been payable if retirement had occurred in terms of the present scheme. Thus Scottish teachers pensioned under the act of 1898 were not left without pensions when that act ceased to apply to Scotland. In consideration of this release of the British treasury from the obligation to pay pensions to retired Scottish teachers and of its further release from all obligation in connection with claims to pensions acquired by Scottish teachers in service who had been contributors under the act of 1898, the Scotch act of 1908 provided that after the launching of the new scheme there should be paid each year by the Treasury into a new general education fund established for Scotland by the act such sum as the Treasury should determine. The payment under the provisions stated of a retiring allowance by the department to a teacher pensioned by a school board or other body of managers relieves the latter to the extent of such allowance from responsibility for payment of the pension granted by them.

Aside from teachers in retirement on a pension, the scheme under its own provisions applies (1) to all "existing teachers," those in service, recorded by the department for pension purposes,³ prior to the beginning of the scheme, who had paid contributions under the act of 1898 or at the date of commencement of the scheme were not over 60 years of age; (2) to other existing teachers, on their own application, by special sanction of the department; and (3) to all "future teachers," those entering recorded service on or after the date of commencement, who are under 50 years of age at the time of entering service, provided always (1) that they satisfy the department of their physical capacity in such manner as it prescribes, and (2) that they hold or are deemed to hold proper certificates of competency. In addition to ordinary certificated teachers in general,

¹ For detailed information in this connection the reader is referred to the "Report by the actuaries appointed on the preparation of the superannuation scheme for teachers." This report is a 16-page pamphlet.

² The official document is available in the form of an 11-page pamphlet.

³ Consult pp. 36, 43.

teachers holding special certificates of qualification in special subjects, those recognized as specially qualified teachers of higher subjects in intermediate and secondary schools, and teachers entered in the records of the department as holders of any other qualifications approved for the time being by the department are deemed to hold certificates of competency. By the terms of an introductory memorandum to the scheme and by the actual practice of the department in recording service under the scheme, but hardly by the terms of the document itself, the scheme applies only to teachers regularly employed in schools or by authorities in receipt of grants under any code or regulations of the department. The scheme regularly applies to secondary as well as elementary teachers, since recognition of special qualifications to teach higher subjects is the regular method of standardizing or certificating secondary teachers.

The scheme requires the department to retain each year from the grants payable to school boards and other managers of schools and employers of teachers a maximum of 4 per cent of the annual salary of every teacher in their employ to whom the scheme applies, which amount the managers in turn may retain in the same proportion from the salaries of the different teachers, and an additional amount equal to 2 per cent of the annual salary of every such teacher, which the managers may not retain from the salaries. These retents the department is required to pay into a State teachers' superannuation fund established by requirement of the act of 1908.¹ Also the department is required to pay each year into the superannuation fund out of the general education fund previously mentioned² (1) a sum equal to 4 per cent and $3\frac{3}{4}$ per cent of the annual salary of every existing man teacher and every existing woman teacher, respectively, to whom the scheme applies, and (2) a sum equal to $3\frac{1}{2}$ per cent and $3\frac{1}{4}$ per cent of the annual salary of every future man teacher and every future woman teacher, respectively, to whom the scheme applies, provided that these percentages may be varied from time to time by the department on actuarial advice. The value of free rent, if any,³ is included in every salary for the purposes of all contributions to the superannuation fund. Finally, the department must provide the superannuation fund each year, out of the general fund cited, with money to pay pensions granted in respect of service rendered prior to the commencement of the present system. The superannuation fund must be kept productive by investment in standard securities.

The conditions of eligibility to a pension are (1) the completion of 10 years of service recorded by the department for the purposes of superannuation, and (2) the attainment of the age of 60 years or

¹ Sec. 14 (2).

² See p. 54.

³ See p. 47.

of permanent physical or mental incapacity for the duties of teaching not caused by the teacher's own misconduct or default. Service in England recorded under the act of 1898 may be applied, so far as needed only, to make up the 10 years required for eligibility. Retirement is compulsory at the age of 65. The certificate or recognized qualification of every teacher lapses on the date when he begins to receive a pension. With the sanction of the department a teacher retired on account of incapacity may later resume recorded service, but no pension may be paid during such renewed service.

In the case of future teachers the amount of the pension is one-sixtieth of the average annual salary throughout the period or periods of service in Scotland recorded by the department multiplied by the number of years of such service, provided that the pension may not exceed two-thirds of such average salary. The value of free rent, if such is afforded, is included in the salary in all cases. In the case of existing teachers the pension is (1) 1 per cent of the average annual salary during the five years preceding the date of retirement multiplied by the number of years of service in Scotland, recorded by the department, prior to the inauguration of the present scheme plus (2) one-sixtieth of the average annual salary in recorded service in Scotland since the beginning of the present scheme multiplied by the number of years of such service since such beginning, provided that in the case of teachers with more than 40 years of service to their credit only the last 40 may count for the purposes of the pension. These pensions are paid out of the State superannuation fund. The pension of any teacher retiring on account either of age or of disability who paid contributions under the act of 1898 may not be less than the amount to which he would have been entitled under that act. Moreover, any teacher who paid contributions under the act of 1898 and not drawing a pension on the ground of incapacity is entitled at the age of 65, both under that act and by the terms of the present scheme, to the regular annuity from the deferred annuity fund purchased by his payments. No pension may be assigned, transferred, or otherwise made payable to any creditor of the legal beneficiary or any other person on pain of withdrawal of the pension.

Doubtless the most unique and striking feature of the new pension system in Scotland is the provision for the return of contributions on withdrawal from recorded service or from the profession or in case of death.

Following are the provisions of the scheme relating to such return of contributions. The term "retiring allowance" includes pensions granted on the ground of disability as well as on the ground of age.

If a teacher withdraw [from recorded service] at any time, he shall be entitled on application to have returned to him the whole of the contributions made by him to the fund, and on such return being made to him he shall cease to have any

claim whatever on the fund, and should he subsequently resume [recorded] service, the date of his resuming shall be the date from which service for a retiring allowance shall count, and service previous to withdrawal shall be reckoned only wherever and to the extent that such service is necessary to make up 10 completed years of service as a condition of obtaining a retiring allowance under the scheme.

A teacher who withdraws at any time shall have the option of leaving his past contributions in the fund, and if he subsequently resumes service, the whole of his service shall count toward a retiring allowance. If a teacher who withdraws shall not resume service, and if he shall not have applied for the return of his contributions, and if before withdrawing he had served for not less than 10 years, then, on attaining the age of 65, he shall be entitled to a retiring allowance out of the fund calculated as [herein] set forth for each completed year of service before withdrawal, but if he had served less than 10 years he shall receive only the amount of his contributions. If a teacher who has withdrawn and not applied for the return of his contributions shall die before attaining the age of 65 years, the amount of his past contributions shall on application to the department be paid to his personal representative.

If a teacher shall die in service there shall on application to the department be paid to his personal representative all the contributions to the fund made by deduction from his salary; and if a teacher who has retired shall die before the amount of retiring allowance actually received by him equals the amount of [his] contributions, then the balance of such contributions shall be paid to his personal representative. In calculating this payment on death after retirement, account shall be taken in the case of existing teachers of the retiring allowance paid both in respect of service previous, and in respect of service subsequent, to the date of commencement of the scheme¹

At the end of every five years from the beginning of the scheme an investigation and valuation of the superannuation fund must be made by an actuary appointed by the department. The actuary on each occasion is required to make a full report to the department, giving the results of the inquiry and valuation, together with recommendations for the guidance of the department in the future administration of the fund.

Finally, the scheme provides that—

any question which arises as to the application of any part of the scheme to any person, or as to the amount of any contribution or retiring allowance, or as to the return of contributions, or as to the grant, refusal, suspension, or cessation of any such allowance, or as to the reckoning of any service shall be decided by the department, whose decision shall be final.²

A set of rules corresponding largely to those provided for administering the act of 1898³ were formulated by the Education Department for administering the new superannuation scheme. The latter rules are less extensive than the former, owing largely to the nature of the provisions of the scheme. They took effect simultaneously with the scheme itself.⁴

The rules provide that, for the purpose of satisfying the department of their physical capacity, all future teachers must be examined

¹ Arts. 17-19.

² Art. 24.

³ See pp. 39 ff.

⁴ The rules are published separately in a small pamphlet.

within a prescribed time at their own expense by medical officers nominated by the department. A maximum fee of 10s. 6d. is prescribed. Existing teachers are not subjected to this requirement. Both future and existing teachers who have not already done so are required to furnish satisfactory evidence of age.

By the terms of the rules the following types of service may be recorded by the department for the purposes of the pension scheme: Service as a teacher in day schools and in certified reformatory or industrial schools, service as a teacher in a training college or under a provincial committee for the training of teachers, and service as an organizing or supervising teacher. It is apparent that the liberal policy consistently followed by the department in recording service under the law of 1898¹ is continued under the present system.

The State authorities are directed to transmit every year to the school boards and other managers the receipt of the Education Department for the retents from the annual grants made in respect of each teacher in their employ to whom the pension scheme applies. Every board or other body of managers is required to furnish every teacher who makes application with a copy of so much of the receipt transmitted to it as applies to such teacher.

The rules prescribe that all pensions and all contributions to be returned must be applied for, application to be made to the department. Teachers applying for a pension on the ground of incapacity must furnish as a condition of success evidence of permanent disability due to no fault of their own by means of a medical examination. Barring certain reasonable exceptions, such applicants must submit to such examination at their own expense by a medical officer chosen by the department. The maximum fee is the same as that prescribed for the physical examination of future teachers on entering service. A teacher seeking a disability pension must not have been unemployed in recorded service for more than one year prior to the time of application, unless for sufficient reason the period is extended by the department.

Every disability pension must be reconsidered by the department at intervals not exceeding three years. At the time of reconsideration the beneficiary must show by a competent physician's certificate, on pain of losing his pension, that he is still qualified to receive the same. Moreover, any disability pension may be suspended or determined at any time within an interval if the department becomes satisfied that the incapacity of the beneficiary has ceased.

It is provided in the rules that teachers who attain the age of 65 years with less than the 10 years of recorded service required for eligibility to their credit shall be considered to have withdrawn at that age and shall be entitled to the return of their contributions.

¹ See p. 43.

Existing teachers over 60 years of age when the scheme became operative and desirous of being included therein were required to make application to the department not later than August 1, 1912.¹

Pensions are made payable in equal installments on the last days of March, June, September, and December of each year, as under the act of 1898. Responsibility for making the payments is placed upon the Paymaster General, who is authorized to require evidence of the life and identity of a retired teacher before making any payment.

It is evident from what has preceded that the observations previously made in reference to the act of 1898 regarding the possibility for teachers to continue to teach as uncertificated teachers while drawing a pension² are also true in their essential points in reference to the new Scotch superannuation scheme.

Late statistics of the salaries of certificated public-school teachers in Scotland upon which their contributions and pensions under the new system are based appear on page 47 in a preceding chapter. No statistics of the salaries of secondary teachers included in the system are available. It is too early to secure statistics of actual pensions awarded under the new scheme. In 1911 the total number of certificated teachers employed in public schools in Scotland in receipt of annual grants was 18,869, of whom 5,189 were men and 13,680 were women.³ These figures may be considered fairly close approximations to the respective numbers of "existing teachers," outside of secondary schools, to whom the new scheme became applicable on April 1, 1912. In 1910 the total number of teachers employed in strictly secondary schools in receipt of grants was 1,359.⁴ What proportion of these were recognized as specially qualified teachers of higher subjects⁵ the statistics do not reveal.

¹ Cf. p. 54.

² See. p. 42.

³ Return Showing (I) A List of Day Schools Aided from Parliamentary Grant, etc., (II) Summarized Statistics of Day Schools in Receipt of Annual Grants, etc., 1910-11, p. 102.

⁴ Rep. for the Year 1911, Secondary Education (Scotland), pp. 49, 51.

⁵ Cf. pp. 54-55.

CHAPTER VIII.

LOCAL PENSION SYSTEMS.

Besides the State systems reviewed in the preceding pages, there have developed in Great Britain certain supplementary or complementary local pension systems for public-school teachers. Particularly important is that of London or, more specifically, the administrative county of London. The London system is especially worthy of study not only on account of its scope and size, but because of its many good features. The general and educational populations of London are nearly equal to those of the whole of Scotland, and the London pension system for teachers is in most respects fairly abreast of the new Scotch system in modernness and progressiveness. Excellent local provision is also made for teachers in the English city of Newcastle-upon-Tyne through the privilege afforded them of participation in the regular pension system for city officers in general. The system is necessarily quite small, however, since the population of the city is only 267,000. A few cities, including Birmingham, have pension systems which include secondary teachers, but not public-school teachers as herein defined.¹ Following are accounts of the chief local systems affecting public-school teachers.

In 1888 the school board of London (administrative county of London) established a superannuation fund for the purpose of pensioning the public-school teachers and other officers in its employ. All regular teachers and officers were required to contribute 2 per cent of their salaries to the fund, and provision was made for liberal assistance from the board, contingent upon the grant of the necessary power by Parliament. Ten years of service were required for eligibility to a pension. Pensions were fixed at one-sixtieth of the salary received at the time of retirement multiplied by the number of years of service up to a maximum of two-thirds of such salary. In 1893, however, these provisions relative to amount of pension were repealed in consequence of the failure of Parliament to authorize financial assistance by the board. The board enacted at that time that in future pension rates should be fixed upon actuarial advice according to the state of the fund. Existing teachers were given the right to withdraw their membership in the fund and the amounts of their past contributions, but it was provided that new appointees must become members. Out of a total of 7,551 teachers belonging to the fund only 1,767

¹ See p. 12.

elected to continue their membership. Since 1893 the pension rates have been but a small fraction of the original amounts. After the passage of the superannuation act of 1898 the fund was divided into two parts—one for teachers and one for other officers of the board. Members of the teachers' fund were later given the right to withdraw from it the amount of their past contributions and to sever connections with it. Nearly all did so. Moreover, the addition of new members was stopped. The small depleted teachers' fund is now managed for the benefit of the members by the London county council, which in 1904 superseded the school board as the local education authority for London.¹ In 1910 the number of contributors to the fund was only 87, while the number of pensioners was 130.² The rate of pension was 15 per cent of the rate originally established in 1888.³

Shortly after the London County Council superseded the London school board as the local education authority the question arose whether teachers in the employ of the council should participate in the regular superannuation system administered by the council for the purpose of providing pensions for its employees. This matter was repeatedly brought to the attention of the council for several years, but so far as membership in the system in question was concerned, little was accomplished. Certificated teachers never gained eligibility, owing chiefly, apart from the establishment of the special pension system for teachers described below, to the fact that by the ruling of the Treasury for a number of years participation in the system would have meant partial or total forfeiture of superannuation and disablement allowances under the act of 1898.⁴ Uncertificated regular teachers were permitted to participate in the scheme, but such teachers in the council's schools have been negligible in number. In 1906 the number of uncertificated teachers was only 31 and in 1911 only 13, not counting several hundred supply and other irregular teachers.⁵ For the most part at least these last were ineligible to membership on the ground of only temporary or part-time appointment.

Considerable dissatisfaction developed regarding the pension conditions of the teachers in the schools of the London County Council after it became the local education authority. The pensions provided under the regular superannuation scheme of the council for

³ Edw. VII, chap. 24.

¹ Minutes of Proc., London County Council, 1910, Vol. II, Part I, p. 892.

The data for this brief account of the pension system of the former London school board have been gathered almost altogether from the annual reports of that body, in which are included short sections under the title "Superannuation."

⁴ Superannuation of Teachers, London County Council, (extracts from the Minutes of Proc., etc.), pp. 3-4; Minutes of Proc., London County Council, 1910, Vol. II, Part I, pp. 875-877.

⁵ Rept. of Ed. Committee, etc., London County Council, 1906, Part I, p. 442; Ann. Rept., London County Council, 1911, vol. 4 (Education), p. iii.

the body of its employees other than public-school teachers were very much better than those provided for the teachers under the act of 1898, which were plainly inadequate.¹ Naturally this state of affairs was promotive of more or less discontent and of undesirable inequalities between the service of education and other fields of the council's activity. After a few years the education committee of the council and the council as a whole became convinced that the pension status of the teachers should be made to correspond approximately with that of other functionaries. In 1910 the council passed a resolution to that effect in part as follows:

[*Resolved*] That, failing an absolute assurance from H. M. Government that it will make the necessary financial provision for a scheme which in itself, or in conjunction with the council, will be in entire accord with the principle that the retiring allowance receivable by a certificated teacher in a London public elementary school, together with the benefits receivable by him or her under the elementary school teachers (Superannuation) act, 1898, shall, so far as possible in all the circumstances, be the same as that to which officers of the council of equal service and similar average salary are entitled, the council do make forthwith for all teachers in the London service an adequate superannuation scheme.²

The assurance from the Government mentioned in the resolution was not received, and late in 1910 the council adopted a special superannuation scheme for teachers drawn along the lines indicated in the resolution. It was carefully formulated under actuarial advice.

This special pension scheme for London teachers³ applied (1) to all teachers holding a permanent full-time appointment in the service of the council and not participating in the regular superannuation system of the council and (2) to all teachers holding a permanent full-time appointment in the service of the managers of voluntary or nonprovided public elementary schools in London and contributing to the deferred annuity fund under the act of 1898,⁴ provided in both cases that teachers must be under 55 years of age at the date of permanent appointment.⁵ Teachers employed in secondary schools and in training colleges were thus included, as well as public elementary teachers. The term teacher, moreover, included supervisory officers, aside from inspectors. All teachers to whom the scheme was applicable were not compelled to become members. Membership was voluntary for those appointed before April 1, 1911, the date of commencement of the scheme, and for those in the service of the managers of nonprovided schools.

In harmony with the policy of placing the pension status of teachers on a par roughly with that of other officers two plans for contribu-

¹ Cf. p. 75.

² Superannuation of Teachers, London County Council (extracts from Minutes of Proc., etc.), p. 4; Minutes of Proc., London County Council, 1910, Vol. II, Part I, p. 877.

³ For the scheme in full, see *ibid.*, pp. 20-21 or 892-894, respectively.

⁴ See pp. 35 ff.

⁵ For the significance of permanent appointment in London, see pp. 31-32.

tions were established, one for teachers contributing to the deferred annuity fund under the act of 1898 and another for other teachers. The pensions of officers other than teachers under the regular superannuation scheme of the council were graded according to salary, and £96 and £72 per year were taken to be rough approximations to the salaries for men and women, respectively, which in the generality of cases under the council's regular scheme produced the pensions received by teachers under the act of 1898. Consequently teachers contributing under the act of 1898 were expected to contribute under the special pension scheme for teachers only with respect to the excess of their salaries above the amount named. The rates of contribution for such teachers appear in the following table:

Age at commencement of contributions.	Rate of contribution.	
	Men (per cent of salary in excess of £96 ¹ per year).	Women (per cent of salary in excess of £72 ² per year).
Under 25.....	4½	5
25 to 30.....	5½	6½
30 to 35.....	6½	7½
35 to 40.....	7½	9½
40 to 45.....	8½	11
45 to 50.....	9½	12
50 to 55.....	10½	12½

¹ Now £120. See p. 66.

² Now £96. See p. 66.

In the next table appear the rates of contribution for teachers not contributing under the act of 1898.

Age at commencement of contributions.	Rate of contribution (per cent of salary).	
	Men.	Women.
Under 25.....	3½	4½
25 to 30.....	5	6
30 to 35.....	6	7½
35 to 40.....	7	9
40 to 45.....	8½	10½
45 to 50.....	9½	11½
50 to 55.....	10½	12

All teachers covered by the scheme who were in service at the date of its commencement and who exercised affirmatively their option of participation in the new system were given the privilege of contributing in respect of service under the council or the managers of non-provided schools in London between the date, May 1, 1904, when the council became the local education authority and the date of commencement of the scheme. Moreover, the date of attaining the age of 55 could be substituted for May 1, 1904, in the case of teachers

attaining that age before that date, in order that all teachers in service might have the opportunity of contributing over the minimum period of 10 years required for eligibility to a pension at the age of 65, as specified below. Easy terms were provided for the payment of such back contributions. Under certain circumstances they could be paid partly or wholly out of the pension after retirement. The scheme further required that the council contribute to the maintenance of the system 3 per cent of the total amount on which contributions are paid by teachers. It was also provided that the council should guarantee the solvency of the system as a whole and also $3\frac{1}{2}$ per cent interest on accumulated moneys. The general financial administration of the system under the scheme was placed in the hands of the Superannuation and Provident Fund, the pension fund maintained by the council in connection with its regular pension scheme.

The conditions of eligibility to a pension established by the special scheme for teachers were (1) the payment of regular contributions for at least 10 years and (2) retirement on account of incapacity for service occasioned by ill health or retirement at or after attaining the age of 65 years. By the terms of a regulation established before the adoption of the superannuation scheme all teachers were required to retire at the age of 65 or, by permission of the education committee of the council, at the end of the school term during which they attained that age.¹ The amount of the pension per annum was fixed at one-sixtieth of the average of the annual salaries upon which the teacher had paid contributions multiplied by the number of years during which the contributions had been paid, provided (1) that the pension of a teacher who had contributed more than 40 years should be forty-sixtieths of the average of the annual salaries during the last 40 years of payment of contributions and (2) that in case of retirement because of ill health within 20 years from the date of commencement of contributions, the pension should be one-third of the average salary specified or one-sixtieth of such average for each year the teacher would have contributed had he remained in the service until the age of 65, whichever should be the smaller. Further, by the terms of the scheme, (1) no teacher contributing under the act of 1898 could be entitled to a pension from the council before reaching the age of 65, unless he received a disablement allowance under that act² or was disqualified for such allowance solely because of not being in pecuniary need of it;³ (2) if a teacher retired on a pension on the ground of ill health should resume teaching in any part of the country before attaining the age of 65, the council might

¹ Regulations with Regard to the Education Service, London County Council, II (Teachers in London Schools), Part I, p. 67.

² See p. 36.

³ See pp. 36, 40.

discontinue his pension in whole or in part; (3) if a teacher retired on a pension should resume teaching in the service of the council, his pension was to cease, his contributions were to be resumed, and he might be retired subsequently on another pension calculated in the regular way; and (4) if a woman pensioner under the age of 65 should marry, the council might discontinue her pension in whole or in part.

The scheme contained provisions for the return of contributions in cases of withdrawal or death which on the whole were just as liberal and just as unique as those of the new superannuation scheme of Scotland previously considered.¹ It was provided in this connection (1) that in cases of retirement by reason of the termination of employment through changes made in the teaching staff or through marriage in the case of women or retirement by reason of ill health before having contributed for ten years, the total amount of the teacher's contributions should be returned to him with interest at 3 per cent per annum, (2) that in cases of withdrawal under other circumstances the total amount of contributions should be returned without interest, unless the teacher had been guilty of dishonesty or misconduct occasioning pecuniary loss to the council, (3) that in cases of death while in service the total amount of the contributions with interest at 3 per cent per annum should be paid to the teacher's legal representatives, and (4) that in cases of death after retirement or of discontinuance of a pension for any reason other than return to the service, the excess, if any, of the contributions paid, with interest at 3 per cent to the date of retirement, over the payments already made on the pension should be returned to the teacher or his legal representatives, as the case might be. Finally, the scheme provided that—

if it is shown by actuarial valuation that there is a surplus which, in the opinion of the actuary making the valuation, can safely be disposed of, such surplus shall be repaid to or otherwise applied as equitably and conveniently as practicable for the benefit of those teachers who created the surplus and who are in the service or are in receipt of superannuation allowances at the date of the valuation, and the council shall thereupon have power to make any such reduction in the rates of contribution payable in the future as the actuary may advise.

In 1912 certain amendments were made to the pension scheme for London public-school teachers here described. In the first place teachers coming under the scheme on receiving a permanent appointment were given the opportunity to pay contributions on any period of service in a temporary capacity immediately preceding permanent appointment. Compound interest at $3\frac{1}{2}$ per cent per annum was required to be paid on such back contributions. Arrangements for payment over a period of time might be made. Further, on receiv-

¹ See pp. 56-57.

ing the necessary authority from Parliament, the council opened the option of participation in the scheme to all teachers holding a permanent full-time appointment in the service of the managers of nonprovided schools within the council's jurisdiction, regardless of participation by such teachers in the Government scheme under the act of 1898. Moreover, in consequence of the increase in State pensions provided by the superannuation act of 1912,¹ the council increased the amount of salary on which teachers contributing under the Government scheme were not required to contribute under the council's scheme. The new limits are £120 and £96 per year for men and women respectively. Finally, it was enacted that—

if, at the date of commencing to contribute, the contributor is subject to a scale of salary of which the minimum salary is under £120 a year (in the case of males) and £96 a year (in the case of females), the contributor's rate of contribution shall be according to the contributor's age at the date when he or she first became subject to such scale, and the contributor shall be deemed to have contributed as from such last-mentioned date for the purpose of ascertaining the benefits payable under the scheme on such contributor's retirement.²

As in the case of Scottish teachers under the new Scotch superannuation scheme,³ the pensions of London public-school teachers are graded according to their salaries. No satisfactory statistics of teachers' salaries in London are available, but a general view of their range and amount may be gotten from the regulations of the council relative to salaries. The substance of the chief of these regulations affecting teachers included in the city pension system for teachers appears in the following paragraph. Numerous variations from these main regulations are provided for, but they can not claim attention here. In general the salaries are the same in non-provided as in council schools, in ordinary as in higher elementary or central schools. By way of explanation of the new term "central schools," it may be stated that higher grade and higher elementary schools in London are being replaced by new institutions known by that name. Though different in some respects and a little more advanced, the new schools belong in the same general class or grade with their predecessors.⁴

The few uncertificated teachers to whom the pension scheme for teachers applies⁵ receive fixed annual salaries of £80 or £100 in the case of men and £75 or £90 in the case of women, according to the amount of training received. The beginning salaries of assistant or

¹ See pp. 38-39.

² The data regarding these amendments of 1912 were courteously provided the writer in the form of excerpts from the Minutes of Proceedings of the London County Council from the office of the comptroller of the administrative county of London.

³ See p. 56.

⁴ Cf. *The Organization of Education in London*, issued by the London County Council, pp. 12-13.

⁵ See p. 61.

ordinary (certificated) teachers range from £80 to £125 per annum for men and from £75 to £102 per annum for women, according to amount of training and amount of previous experience. The salaries of men increase by annual increments of £5 for two years and £7 10s. thereafter up to a maximum of £200, provided that no salary can rise beyond £150 unless the council authorizes it within two years after that figure has been attained on a report of the proper officers that the teacher is efficient and deserving of further advancement. The salaries of women rise by annual increments of £4 to a maximum of £150, save that no salary can rise beyond £130 without authorization by the council within two years after that figure has been reached on a proper report that the teacher is fit and deserving of further advancement. The salaries of head teachers or principals range from £150 to £400 per year for men and from £125 to £300 per year for women, according to size of school and amount of service in the capacity of head teacher. The minimum salaries are £150, £200, and £300 for men and £125, £150, and £225 for women, according to size of school. The corresponding maximum salaries are £210, £300, and £400 for men and £160, £225, and £300 for women. In the case of head teachers in central schools only the two upper minima and two upper maxima apply with respect to both men and women. Except for those in small schools other than central schools, the annual increment of salary for head teachers is £10 and £8 for men and women, respectively. To be eligible for appointment to the position of head teacher men must have had at least ten years of experience in teaching and women at least eight years.¹

In 1911 the total number of teachers in the public schools of London was 17,963, of whom 5,507 were men and 12,456 were women. Nearly all were certificated. The number of head teachers was 2,311, of whom 799 were men.² On March 31, 1912, one year after the commencement of the London pension system for teachers, the number of contributors or active participants therein was 16,104. Only about 150 were other than public-school teachers in the sense in which the term is used in this study. Those not belonging to this group were mainly secondary teachers as herein understood.³ During the first year 60 teachers were retired on a pension. The pensions ranged in amount from £5 17s. to £49 16s. The first pensions under the new scheme were naturally small, though in most cases they were doubtless supplemented by State pensions under the act of 1898.⁴

In 1892 the city council of Manchester established under special statutory powers the Manchester Corporation Thrift Fund for the

¹ Regulations with Regard to the Education Service, London County Council, II (Teachers in London Schools) Part I, pp. 20ff; Minutes of Proc., London County Council, 1910, Vol. II, Part I, p. 1505, Part II, pp. mvi; Ibid., 1911, Vol. I, Part I, p. 957, Part II, pp. dcxxxv-ff.

² Ann. Rep., London County Council, vol. 4 (Education), pp. iii, iv.

³ See p. 13.

⁴ These statistics of 1912 were furnished the writer by correspondence from the office of the comptroller of the administrative county of London.

purpose of providing insurance against disability and old age for city employees. In 1903 by the terms of the education act of 1902¹ the public-school teachers of the city became city employees, and in due time they received the right to participate in the Thrift Fund. The insurance system centered in the fund is not a pension system, but it serves a like purpose and has numerous features in common with the ordinary pension system. Accordingly, a brief account of the project is here introduced.

Membership in the system is required of some employees and is optional with others. Teachers are included among the latter. Every member contributes to the fund $3\frac{3}{4}$ per cent of his salary and the city contributes $1\frac{1}{4}$ per cent of the same. No one who becomes a contributor may withdraw from membership while in the service of the city. On retirement from the service on or after attaining the age of 65 years, or at any time on account of disability, a contributor is entitled to a lump sum from the fund equal to the whole amount of his own contributions and the contributions of the city on his behalf, together with accumulated compound interest on all contributions at 4 per cent per annum. If a contributor dies while in service, his legal representatives are entitled to the same amount he would have received in case of regular retirement at the time. If a member voluntarily leaves the service before becoming incapacitated or attaining the age of 65, he is entitled to receive from the fund the whole amount of his own contributions only, together with accumulated compound interest thereon at 4 per cent.²

In 1909 no less than 2,352 public-school teachers of Manchester were contributors to the Thrift Fund.³ This was about two-thirds of the entire number. In 1911, of 3,919 teachers and officers of the whole education service who were eligible, 2,907 were contributors to the fund.⁴ Nearly all were public-school teachers.

In 1904 a local pension system for teachers and others in the direct employ of the city, embodying a special superannuation fund, was established by special parliamentary action in Newcastle-upon-Tyne. The scheme seems to have taken effect in 1905. Later teachers in nonprovided schools were included. Membership in the system was voluntary. Only a small proportion of the teachers identified themselves with the system under the scheme of 1904, owing chiefly to the fact that by action of the Treasury membership involved partial or total loss of superannuation and disablement allowances under the act of 1898.⁵ The system was thoroughly reorganized in 1911.⁶

¹2 Edw. VII, ch. 42. See p. 30.

²See pamphlet, *Manchester Corporation Thrift Fund*, 4 pp.

³Seventeenth Ann. Statement, Thrift Fund, Corporation of Manchester, pp. 11-31.

⁴Ann. Rep. of Ed. Committee, City of Manchester, 1910-11, p. 177.

⁵Cf. p. 61.

⁶Newcastle-on-Tyne Teachers' Superannuation Guide, issued by the Newcastle branch of the National Union of Teachers, pp. 5 ff.

This reorganization took place by virtue of provisions of the Newcastle-upon-Tyne corporation act of 1911,¹ which took effect on April 1, 1912. The pension provisions of the act apply optionally to all officers and servants, including teachers in both municipal and nonprovided schools, in the permanent and exclusive service² of the city or city council. All existing and future employees were given the right to decline to participate in the system under the new scheme by notifying the city of their wishes within a limited time. In default of such notification they became or become members automatically. All existing employees becoming members under the new scheme who were not members under the old were required to pay with interest all contributions at the old and relatively low rates which they would have paid prior to the beginning of the new scheme if they had become members in 1905, when the system was launched, or at such later time as they entered the service of the city. All members under the new scheme, except teachers contributing under the act of 1898, to whom special provisions apply,³ are required to contribute to the superannuation fund at rates varying in the maximum from 4 to 8 per cent of their full salaries according to the amount of service to their credit at the respective dates when they became (or become) contributors. The city is required to contribute annually an amount equal to the sum of the contributions of members during the year, and additional amounts needed to secure the solvency of the superannuation fund. The fund must be examined every five years by a competent actuary, who is empowered to fix within the established limits the rates of contributions for the ensuing quinquennial period. The conditions established by the act for eligibility to a pension are (1) at least 10 years of service, (2) incapacity for service, 40 years of service and the attainment of the age of 60 years, or the attainment of the age of 65, and (3) retirement from service. Except with regard to teachers to whom the act of 1898 applies, the annual amount of the pension is one-sixtieth of the average amount of the pensioner's salary during the five years preceding retirement multiplied by the number of years of service, save that no pension may exceed two-thirds of such average amount of salary. In general, all past service within the present limits of the city from the date of appointment is reckoned for the purposes of determining the amount of the pension. Any member who loses or otherwise ceases to hold his position before becoming eligible to a pension for any reason other than his own misconduct or voluntary resignation is entitled to a refund of all his contributions. If a member dies before receiving a pension,

¹ For the pension provisions of the act (1 and 2 George V, ch. cxix), see *ibid.*, pp. 32-41.

² For the general significance of permanent service in England with respect to teachers, see p. 32.

³ See below.

the city must return to his widow or family one-half the amount of his contributions and may return the entire amount. With regard to teachers included in the State teachers' pension system under the law of 1898, the act contains provisions very similar to those embodied in the London scheme for teachers.¹ Contributions are to be paid and pensions to be calculated upon only a portion of the teacher's salary to be determined by the city in such manner that the total State pension plus the pension from the city shall be approximately equal to the pension the teacher would receive if he were identified with the city system alone.

There are at present about 1,100 teachers in the service of the city (city council) of Newcastle-upon-Tyne, the great majority of whom are public-school teachers as the term is used herein. Of this number about 70 are ineligible for membership in the city pension system. Of the remainder only 97 are members of the city system alone, while 236 belong to both the city system and the State system.²

The preceding survey includes all local pension systems for public-school teachers of major importance in England and Wales. In addition to these there are possibly a very few minor systems, but no special attempt has been made to include any such. The small cities of Chiswick and St. Helens have authority by action of Parliament to include with certain adjustments public-school teachers in their local superannuation systems for municipal employees, but at this writing this has not been consummated in either case. In securing data for the present chapter the writer used a list of communities having local systems for any or all grades of teachers in the employ of the public educational authorities which was supplied from the offices of the board of education and was complete to the best knowledge of the compiler.

Local pension systems of a sort for public-school teachers have been more numerous and at the same time necessarily smaller in Scotland than such local systems elsewhere in Great Britain. On the whole, however, they have been organized and administered under general State laws, whereas those in England have been based upon purely special or local acts. Consequently, local systems in Scotland under different acts have been treated collectively in the preceding chapter as State systems of a certain type or types.³ For an account of local systems in Scotland the reader is accordingly referred to the pertinent portions of Chapter VII.

¹ See pp. 62 ff.

² For these current statistics the writer is indebted to the secretary of the education committee of Newcastle-upon-Tyne.

³ See pp. 52-53.

CHAPTER IX.

CONCLUSIONS.

Among the first lessons to be drawn from the preceding survey of teachers' pensions in Great Britain, coupled with the experience of various other countries, is the utter insufficiency of voluntary cooperative effort by teachers themselves, philanthropic action, and local public action, either singly or in combination, in comparison with State legislation as means of making provision for superannuated and disabled teachers. It is quite clear from the present study that the State has been the sole effective agent in making provision for superannuated and incapacitated teachers in Great Britain. The pension minutes of the two Committees of Council on Education, as administrative regulations, were somewhat analogous to State legislation, but their effectiveness was hampered by the insufficiency of appropriations for education by Parliament. However, the pensions provided by this secondary legislation of the Committee of Council represented practically all that was accomplished in this field until the positive legislation of 1898 established a comparatively substantial State-wide pension system for public-school teachers. The conspicuous meagerness of the present provision for teachers' widows and orphans in Great Britain¹ in default of State action is important evidence in support of the proposition here set forth.

Our experience thus far in the United States very largely coincides with that of Great Britain and other countries in the respect under consideration. Most of what has been accomplished here in the matter of pensioning public-school teachers has been accomplished by State action. It is true that much more would have been achieved by other agencies had the State not stepped in, but there is little reason to believe that adequate general pension systems would ever develop in default of State action. There are those in America of individualistic bent who would very much like to see the State pursue a laissez-faire policy with regard to teachers' pensions, believing that the matter should be left to the teachers themselves. Those who are skeptical of the importance of teachers' pensions are perfectly consistent in this attitude; but granting that the pensions are desirable or needful, State action seems the only effective means for gaining the desired end. The work of the Carnegie Foundation for the Advancement of Teaching in pensioning college and university teachers in America is a conspicuous exception to the principle under consideration.

¹ See p. 83.

Differences of practice in different countries in the matter of exacting contributions from teachers in support of public pension systems in their favor raises an important issue in the economics of teachers' pensions. Throughout Germany, with the exception of Bavaria, teachers pay no contributions whatever. In France heavy retents from salaries are universal. Practice in Great Britain represents a compromise between these extremes, since the contributions on the whole are moderate in amount. In the United States small contributions are usually required. Except often for a period of years following the introduction of a substantial pension system, the writer distinctly favors the German practice, in view of its simplicity and administrative economy, because contributions or retents are not necessary in the long run to secure the perfectly legitimate end sought, viz, partial or complete support of the pension system by the beneficiaries. The writer is firmly convinced that, even in the case of entirely noncontributory pension systems, economic forces definitely tend to throw the whole burden of support upon the beneficiaries, in so far as the pensions are really desired. To the extent that teaching positions, or any other, are rendered more attractive by the provision of pensions, the compensation in the form of salary of any given grade or quality of services gradually adjusts itself to the present value of the claim to a pension so that the total compensation in the long run is not materially affected, other conditions remaining the same. This adjustment takes place chiefly through the failure of salaries to increase as they otherwise would, rather than through actual reductions. The whole process is simply a readjustment of economic forces whose equilibrium has been disturbed by the introduction of the pension system. The process of equilibration ordinarily requires a considerable period of time, and for that reason the inauguration of a pension system with regular contributions or retents is often justifiable, provided the contributions decrease in amount on a sliding scale through a period of years until they disappear. If otherwise satisfactory, the same purpose might be served by the plan of beginning with small noncontributory pensions which gradually increase until the regular or desired amounts are reached.

It is not expedient to enter into an extended exposition or defense of the position taken in the preceding paragraph. The reader must rigorously apply the principles of modern economics and come to his own conclusion. The whole argument may be summarized in the two principles, (1) that pensions granted on condition of service are a part of wages or salary in the form of deferred payment, and (2) that the material rewards of teachers are controlled by the same economic laws as those of other workers.¹

¹ In reference mainly to the second principle compare *The Salaries of Teachers*, by John B. Clark, *Columbia University Quarterly*, vol. 1, pp. 111-122; also *A Comparative Study of Minimum Salary Legislation*, by the writer, *Educational Review*, vol. 35, pp. 285-299.

Those who claim that economic law does not fix wages and salaries in education and the professions are quick to point out marked exceptions and discrepancies. They have no difficulty in discovering, for example, two teachers of widely varying efficiency receiving the same salary. These exceptions, however, are simply variations from the norm. The same variations prevail in industrial pursuits. The sole difference is that in the latter the variations are smaller in relative amount, because the tests of efficiency are more patent and exact. If a satisfactory measure of teaching efficiency were invented, and the statistical method were applied before any changes were made in the present régime, it would be found beyond any reasonable doubt throughout the entire gamut that the central tendencies of the grades of services corresponding to different salary figures vary in amount fairly regularly with these figures. This would mean, of course, that economic forces are in control corresponding to those that dominate in the industrial field.

If the preceding arguments are sound, the requirement of contributions as a permanent feature of a teachers' pension system serves no useful purpose. Not only so, but the proper abolition of the contributions is a distinct economy, since they introduce needless complexity, are a source of constant irritation and misunderstanding, and are responsible for a vast amount of unnecessary bookkeeping and other clerical work. They represent thus a definite waste of time, money, and energy. On these grounds the gradual elimination of the contributory features of the present British pension systems for teachers, and without any reduction in the pensions, would be a distinct advantage. As a permanent policy, the German practice is the correct one. The writer has no disposition to criticize the requirement of contributions as an initial temporary feature. This is considered perfectly sound, since teachers have no valid claim to the temporary advantages falling to them as a result of the disturbance of economic forces occasioned by the abrupt introduction of a pension system. Indeed, no fault could probably be found with the requirement as an initial measure of still larger contributions to the total pension by the act of 1898, the new Scotch regulations, and local schemes. It is only the permanent requirement of contributions that is deemed inadvisable. Finally, in this connection the relative simplicity, smoothness, and economy of operation of noncontributory systems are commended for serious consideration in the establishment and administration of pension systems for teachers in America. Most American systems require small contributions from the teachers affected, as already stated. The writer's suggestion is that legal provision be made for the gradual suppression of these contributions in the interest of general economy for the future.

On the basis of the preceding considerations it is clear that the frequent justification of teachers' pensions as partial compensation for meager salaries or as special rewards for those spending their lives in lofty and devoted service in a noble calling rest very largely upon fictitious assumptions. Both these purposes would be defeated in the long run by economic law. The real justification does not lie in any benefit to teachers as individuals, but in resulting improvements in education making for greater efficiency and economy. The important ways in which a pension system may serve this larger purpose, and the adaptability of the systems of Great Britain to this end, will be next considered.

One general limitation of the British State systems which to the mind of an outsider precludes the fullest realization of any benefits derivable from teachers' pensions may as well be noticed at the outset. This limitation is the complete exclusion of uncertificated teachers, who have constituted a large proportion of the teaching body. It has already been shown ¹ that in 1908, for example, the number of uncertificated teachers was nearly 65,000 in England and Wales and nearly 2,800 in Scotland. Without doubt these teachers have been less of a problem in the matter of pensions than certificated teachers, not only by reason of their fewer absolute numbers, but because they undoubtedly have tended to leave the profession in larger proportions and because a considerable proportion of them have tended to become certificated; but a system leaving such a large body of teachers entirely out of account can hardly be considered adequate in the sense of completeness. No service as an uncertificated teacher can be counted in the event of subsequent certification. In general both classes of teachers are included in local systems.

The chief way whereby a teachers' pension system may promote educational efficiency and economy is by enabling authorities promptly and honorably to dispense with the services of deserving teachers who have become ineffective through disability or old age. One of the serious problems in many school systems not identified with a pension system is the disposition of incapacitated and superannuated teachers whose usefulness has gone, but who are still more or less dependent upon their salaries. Such teachers in most cases are faithful servants of long standing and highly respected. Neither ethical standards nor public sentiment would sanction their reduction to subordinate or menial positions, and outright dismissal is out of the question. A pension system is plainly the logical remedy for these difficulties, and its effectiveness and economy in meeting them furnish the chief test of its value. This essentially means in part that a pension system may be an effective agency in breaking up security of tenure at a point where it is highly undesirable. The first legisla-

tion on teachers' pensions in Great Britain, that enacted for Scotland in 1861, was directed specifically to this end.¹

Obviously, the plain limitations of the pension systems of the Committees of Council in Great Britain² rendered them utterly inadequate to satisfy any except the most pressing needs of the kind in question, and of this fact the committees themselves were fully conscious. The act of 1898 was a very great improvement, but, quite apart from the exclusion of uncertificated teachers, it fell far short of meeting the situation fully. This was because the pensions provided were so inadequate in amount. The insufficiency of the pensions in amount may be readily seen by consulting the provisions of the law and also the annuity tables³ in connection with the rates of contribution to the deferred annuity fund.⁴ This inadequacy of pensions of course rendered the portion of the law which was essentially equivalent to a provision for compulsory retirement⁵ more or less violative of the obligations felt to rest upon the public. Accordingly, the pension system as a whole could hardly be considered a satisfactory means of disposing of superannuated teachers. The emendatory act of 1912,⁶ passed after the original law ceased to apply to Scotland, doubled the superannuation allowances, substantially improved the disablement allowances, and slightly increased the annuities for men by a slight increase in the annual contribution. Under the present provisions a man who spends his life—40 years, let us say—in the public schools as a certificated teacher will receive on retirement at the age of 65 a total pension of approximately £78. The superannuation allowance will be £40, the annuity about £38. Under the same conditions a woman teacher's total pension will be approximately £59, owing to the fact that her annuity will be only about £19. The annuities of teachers retiring now are only small fractions of the amounts here given,⁷ but they are gradually increasing. Disablement allowances after service as a certificated teacher of 25 years, let us say, will be £42½ in the case of men and £30 in the case of women. These pensions are of course much more nearly adequate than those provided prior to 1912, but they can hardly be considered proper proportions of the better salaries paid in England and Wales.⁸ The new pension system of Scotland must be acknowledged by all to be on the whole a satisfactorily effective means of disposing of disabled and superannuated teachers. Though uncertificated teachers are excluded, this is a much less serious matter than in the case of the act of 1898, because of the relatively small number of such teachers in Scotland at the present time. In 1911 the total number of such teachers in public schools

¹ See pp. 51-52.

² See Ch. II.

³ See p. 44.

⁴ See pp. 35, 43.

⁵ See p. 35.

⁶ See pp. 38-39.

⁷ Cf. pp. 45-46.

⁸ See p. 47.

had decreased to 1,182.¹ In respect to the size of the pensions provided, the Scotch system compares very favorably with the best systems elsewhere. The local systems described in the preceding chapter are strong where the national system to which they are complementary is weak. All classes of regular teachers are covered by the local regulations, and provisions are made for adequate pensions. The weakness of the local system lies in the provisions for optional membership. All future teachers are not required to participate. This obviously must interfere more or less with the efficiency of any system in promoting the considerate removal of disabled and aged teachers. In London membership is optional for teachers in nonprovided schools, the number of whom in 1911 was over 4,000.² In Newcastle-upon-Tyne all membership is optional, and only a relatively small proportion of the teachers have identified themselves with the system.³

A second important way whereby a teachers' pension system may promote educational efficiency and economy is by increasing the stability of the profession. In England, and even more in the United States, members of the so-called teaching profession have been too often like birds of passage, entering the field with uncertain purpose, circling about for a time gaining bizarre experiences, and then departing on the regular current of life. Any agency which promotes professional stability in such countries should be welcomed. Pension systems may accomplish much in this direction. The individual who has been working for a number of years in a school system identified with a good pension system will think twice before he enters another calling. He has partially earned a substantial annuity for his declining years, and he is growing older every year. If he leaves the profession he must relinquish more or less of this advantage. In short, as a result of this motive, fewer individuals can be attracted away from teaching when their services are beginning to be of really professional value. Moreover, the provision of pensions not only tends to hold teachers in the profession after they have entered, but the relative lowness of salaries caused by the pensions⁴ tends to keep out those who have no expectation of fulfilling the requirements for the enjoyment of the retiring allowance. Again, pensions may increase the stability of the profession by promoting security of tenure, though one of their important functions is to promote just the opposite thing in cases of inefficiency due to age and disability.⁵ Teachers who are year by year earning a competence for the evening of their days in the form of a pension have a vested interest which must be respected

¹ See Return Showing (I) A List of Day Schools, etc., (II) Summarized Statistics of Day Schools, etc., 1910-11, p. 103.

² Ann. Rep. London County Council, 1911, vol. 4 (Education), p. iv.

³ See p. 70.

⁴ Cf. p. 72.

⁵ See p. 74.

by all reasonable security of tenure. Legislative and administrative authorities must yield to the demand that teachers shall not be deprived of these vested interests by removal from the service except for good and sufficient cause. Reasonable security of tenure granted by the public authorities, moreover, tends quite properly to result in the correlated demand that teachers shall not leave the public service of their own volition, but only for cause with due authorization. In France, Germany, and other countries where security of tenure has been conceded, this correlated obligation has also developed in fairly definite form. Civil-service rules apply. Unauthorized withdrawal from the profession is considered desertion and carries with it at least the loss of all pension claims.

It is worthy of notice in this connection also that not only do teachers' pensions promote the stability of the profession, but the latter also promotes the former. There is mutual reinforcement. A degree of professional stability is essential not only to the success, but to the value of a pension system. Without a degree of stability pensions would obviously be of little use. When the teaching body becomes reasonably stable a substantial pension system may be expected to appear, but not sooner; and as professional stability increases, the pension system may be expected to become more thoroughgoing in character. Thus, pensions and stability reciprocally interact with mutually strengthening effect.

The provisions of the State teachers' pension laws of England and Scotland which are promotive of the stability of the teaching profession are much less exacting than those of most other laws, though the local laws and regulations presented in the preceding chapters correspond more nearly to common practice. Thus it will be observed that, contrary to the general rule throughout Europe, public-school teachers in Great Britain are not required to remain in service till the legal age of eligibility for the receipt of a regular retiring pension from the State in order to secure such pension when they reach that age. Neither are they required to receive any official authorization to retire in order to retain their pension rights. The provisions of the laws are such that in most cases all other requirements may be fully satisfied years before the age of eligibility is attained. At any time after they are fulfilled a teacher may freely leave the service without jeopardizing in the least his right to a State superannuation allowance at due time. The allowance is smaller, of course, in such cases. Moreover, a teacher who leaves the profession before all the other conditions are fulfilled is not obliged to lose all his vested interest in the pension system, as is the case in most other systems. This is true of both State and local systems. In England and Wales a teacher retains his right to the full annuity which his contributions up to the time of withdrawal have purchased. In Scotland and London he

may receive back the full amount of the retents from his nominal salary. It should be recognized that the contributions paid are but a part of the teacher's legitimate vested interest, since the system is not supported entirely by contributions. If no contributions whatever were required, the teacher would still have a vested interest, one paid by invisible contributions made from his salary by the operation of economic law. Claims to such vested interests are really equal in validity to those for the return of visible contributions.

Despite these limitations there are forces operative in the State pension systems of Great Britain which must definitely contribute to professional stability there. In the first place, a teacher must render a reasonable amount of service before he can secure a right to the whole of the vested interest he has perforce accumulated; also he must sacrifice the major portion of this interest if he withdraws before rendering the required service; and, finally, there can be no doubt that demands and desires that the vested interests of teachers be respected must have some effect, little though it may be, in decreasing the relative insecurity of tenure that has prevailed in Great Britain. As a matter of fact, in view of the practically complete lack of any legal provision for security of tenure, it would seem that the provisions in the pension laws promoting professional stability are sufficiently exacting. It would doubtless be an imposition upon what are considered individual rights to require continuous service till a prescribed advanced age to gain eligibility to a pension or to require teachers who leave the profession to lose everything in a country where the conditions of tenure are uncertain. This is all suggestive for procedure in America, since conditions of tenure here are certainly no better.

It will be observed that distinct pension funds administered as separate units, into which all contributions are paid, are maintained in connection with both the State teachers' pension systems in Great Britain. In Scotland all pensions are paid entirely from this fund; in England only the deferred annuities. Similar funds are also maintained in connection with the general pension systems of English cities, in which teachers participate. Such funds are a very common feature of contributory pension systems elsewhere, including the United States. The superiority of this plan over that of placing the financial administration of the pension system directly in the hands of the State or city treasury is hardly apparent. Particularly is this true when it is recalled that pension systems for public-school teachers are not intended to be self-supporting, but must receive aid from public funds. The French plan, in which all contributions are paid directly into the State treasury and all pensions directly from it out of regular appropriations for the purpose, would seem to be simpler and equally good, everything considered. The financial ability and integrity of the civil corporation ought to be sufficient to meet the self-imposed

obligations of the pension laws, including the return of contributions in whatever form in cases of withdrawal from the service. The maintenance of the deferred annuity fund established by the pension law of 1898 as an independent and entirely self-supporting affair is doubtless based more or less on the belief that the annuities resulting from the contributions to this fund are the only part of the total pension of a teacher for which he has paid and in which he has a valid vested interest. This belief the writer considers erroneous, as already pointed out.¹

Regardless of the question concerning the advantage of independent pension funds in connection with teachers' pension systems, the organization and administration of the funds of this type in Great Britain on actuarial principles and advice are especially commendable. These features have been presented in earlier chapters.² As a result of this application of actuarial science the actual and periodically recommended quantitative specifications of the annuity system in England and Wales and of the entire pension system in Scotland are of distinct suggestive value for those concerned in the administration of independent pension funds in the United States and other countries. In the United States at least the application of actuarial science and advice in the management of such funds has been woefully neglected, with undesirable and even disastrous consequences in certain quarters.

In the present pension systems of Great Britain the usual practice of grading teachers' pensions according to length of service is consistently followed. This is obviously correct and needs no special justification. The other common practice of grading pensions according to salary has not been followed, however, except in local systems and since 1912 in Scotland. The reasons for grading pensions according to salary seem to the writer just as strong as those for gradation according to service.

If pensions are not dependent upon salary, they must ordinarily be small; otherwise the pensions of many persons will exceed the salaries previously drawn—an intolerable state of affairs. Small pensions, however, bear no proper relation to the standard and expense of living of those drawing the better salaries and occupying the larger and more dignified positions. It is unsafe to assume that they save a greater proportion of their salaries than others, since many of them have families, and social pressure requires of them a standard of living commensurate with their position. Such persons on retirement can not abandon all semblance of their usual standard of living without great hardship. Consequently, there is bound to be great reluctance to retire them in case of failing efficiency on a pension which would be perfectly adequate for the average grade teacher, let us say. More-

¹ See p. 72.

² See pp. 37, 44-45, 53-54, 57, 62, 65, 69.

over, the vested interest represented by a small pension has relatively little influence in restraining the more capable and valuable members of the profession from accepting inducements in other callings. In short, the capacity of a pension system to promote educational efficiency and economy in the usual ways with respect to the higher ranks of the profession requires that the pensions available for the occupants of the better positions be an adequate proportion of their salaries. This means general gradation of pensions according to salary.

From these considerations and the fact that the salaries of certificated teachers in England and Wales range between rather wide limits,¹ it would seem that the recent introduction of the plan of grading pensions according to salary in Scotland² could well be repeated in England. One explanation that may be offered for the failure of the act of 1898 to provide for the gradation of pensions according to salary is the fact that salaries vary and fluctuate more or less indiscriminately in Great Britain, as in the United States, and consequently, in connection with the insecurity of tenure, teachers' remuneration sometimes grows less rather than larger with age and service. In certain countries of continental Europe this could rarely happen, since salaries are graded by law according to age and service. There the teacher's salary at the end of service is a just basis for the amount of pension, whereas in Great Britain or the United States this would frequently not be true. This difficulty is met in the new scheme in Scotland by grading the pension on the basis of the average annual salary of the teacher throughout his entire period or periods of recorded service.²

American practice may well follow more largely than it does that of Great Britain and other European countries in providing small pensions to facilitate the retirement of teachers who become incapacitated prematurely. For the promotion of educational efficiency, these disability or disablement pensions are certainly just as serviceable as regular superannuation allowances. Like the latter they should be graded according to both age and service, and for the same general reasons. In England and Wales disability pensions or disablement allowances, like superannuation allowances, are graded only according to length of service. In Scotland under the new system and in London and Newcastle they are graded on both bases. The disability pensions provided in Great Britain, as elsewhere, seem relatively insufficient in amount to serve most effectively the purpose for which they are intended, especially in view of the likelihood of early retirement, but of course they can not consistently be made to approach the size of regular pensions. This is apparently an un-

¹ See p. 47.

² See p. 56.

avoidable weakness. Such pensions, however, even though they must be small, amply justify themselves in relation to the others in any system.

The conditions and methods controlling actual retirement on a pension are very important. The arbitrary retirement of teachers at a given time determined by age, or by age and service together, is wasteful. At best this time can be properly adapted only to the so-called average or typical teacher. Some teachers of impaired efficiency should be required to retire earlier on smaller pensions, and others who retain their efficiency should be permitted and even expected to continue in service longer. The retention of the first class of teachers till an arbitrarily fixed time is obviously poor economy. The arbitrary retirement of teachers still fairly efficient is no less wasteful, for in such cases the public is required to bear two burdens, salary and pension, when one would serve the purpose just as well. The ideal plan is one in which the time of retirement on a pension, subject to the fulfillment of reasonably low minimum conditions of age and service, depends upon the decision of a State board of retirement or other central agency with power to compel retirement or to require continuation of service, as the public interest demands. No doubt there should be provision for voluntary retirement after very long service, varying somewhat with age perhaps, but no teacher still capable of efficient service should be pensioned off automatically or otherwise so long as he desires to remain in the work. There should also be provision for compelling withdrawal from the service on sufficient grounds before eligibility to a pension has been attained. In countries where teachers are State servants, subject to civil-service rules, this general plan can readily be followed, and it is followed more or less fully in France, Germany, and elsewhere; but in countries like Great Britain and the United States where public-school teachers are merely local employees and without legal security of tenure, it is not feasible.¹ Local self-interest may be counted on to some extent in the latter countries to occasion the retirement, through dismissal if necessary, of disabled and superannuated teachers who are eligible to a pension, but local authorities can not retain in service efficient teachers wishing to withdraw on pain of loss of pension rights or by any other means. Nor is it desirable for central authorities to require efficient teachers to remain in service after minimum conditions of age and service have been satisfied in countries where tenure is not secure and teachers are not State officers. In general, British public-school teachers are compelled to retire at the age of 65 without

¹ The reasoning here is sound quite apart from the question of the general wisdom of the plan of placing teachers under strict civil-service regulations, concerning which there is much room for differences of opinion.

reference to length of service.¹ In England teachers of special fitness may be allowed to continue in service for a further limited time, and in Scotland retirement is optional after the age of 60. Under the prevailing conditions the plans in both countries are good. The supplementary requirement of retirement after a given amount of service is not important. It would seem that the London and Scotch plans of retirement could be improved if the age of compulsory retirement were rendered a little flexible by a provision similar to that in the English plan whereby teachers who have retained a high degree of efficiency might be permitted to remain in service longer. If such a provision did not result in improvement the writer would consider the age of compulsory retirement too high, despite the provision for voluntary retirement during the preceding five years.

It is worthy of notice that, in general, pensions for public-school teachers in Great Britain have been provided through the agency of State-wide systems, as in other important countries, whereas in America many systems are only local affairs. Moreover, while local systems in Great Britain are merely supplementary to the State systems, most of those in America are the only ones affecting the respective communities. American practice may well follow that of Great Britain in this respect. There is a distinct advantage in having pension systems as wide as is feasible territorially. A teacher passing from one place to another should not be obliged to forfeit claims he may have acquired to a pension in the first position. The necessity of such forfeiture tends to render the teaching body static and inert. Teachers tend to become local fixtures. Reasonable mobility in the profession is highly desirable, as well as reasonable stability. Without mobility there are sure to be many square pegs in round holes, and vice versa. The effect is the same, whether the local pension system is contributory or noncontributory. The development of systems covering large areas is the obvious remedy. The State is the largest feasible unit in the United States for the purposes of pensioning public-school teachers, and local systems should be replaced by State systems, or rendered merely supplementary thereto, as rapidly as the advancement of the pension movement warrants. The Nation would be a better unit were it not for the weakness of the Federal Government in matters educational. Wherever a distinctly local system is maintained, whether contributory or not, provision should be made for adequate compensation for the loss of pension claims suffered by a teacher who chooses to enter the service of another community. This should be done not only in the interest of professional mobility, but because failure to make such provision places a community at a disadvantage in competition with others for the services of desirable teachers for its schools.

¹ Cf. pp. 35, 42, 56, 64.

The establishment of local pension systems for teachers supplementary to State systems where the latter are inadequate, as has been true in England, is of course a distinct advantage. This is quite a different matter from the provision of local pensions only, as in the case of New York City, for example. Just as a purely local pension system may well be considered better than none, so an adequate compound system consisting of a local system supplementing a State system may rightly be considered better than an inadequate State system alone. This logic definitely applies to the few local supplementary systems in England. By means of the local system of London, for example, adequate pensions are now provided for all regular teachers in the service of that city, certificated and uncertificated. More English communities might well follow the example of the few.

The provision of the national insurance law of 1911 exempting teachers included in one of the State pension systems from compulsory health insurance¹ is directly in line with provisions of the similar laws previously enacted in the German Empire and in France.² Aside from any influence of precedent, the chief reasons for this exemption were probably the facts that the teachers affected were already paying much larger contributions than the insurance law requires for a form of State insurance and that the purposes of the health insurance were partially covered by the disablement pensions to which the teachers were entitled under the pension regulations. Their status as a partly professional body no doubt had some influence also. On the whole the exemption seems quite correct.

Finally, attention may be called to the almost complete absence of pensions for the widows and orphans of public-school teachers in Great Britain, in harmony with conditions in the United States, and in contrast with those in the leading countries of continental Europe. For over a century a State pension fund for pensioning the widows and orphans of certain public-school teachers³ has been in existence in Scotland. For a long time all parish and burgh schoolmasters were required to contribute to this fund, but since 1872 membership in the fund has been optional except for those who were then contributors.⁴ The fund has long been on the decline and is now becoming extinct.⁵ Also some provision is made for teachers' widows and orphans by the benevolent and orphan fund of the National Union of Teachers,⁶ but it is negligible when the whole field of possibilities is considered.

¹ See pp. 48, 50.

² See Bulletin of the U. S. Bureau of Labor, No. 91 (Nov., 1910), pp. 967, 1004; No. 96 (Sept., 1911), pp. 537, 593, 684.

³ The Burgh and Parochial Schoolmasters' Widows' Fund.

⁴ Cf. 35 and 36 Vict., ch. 62, sec. 77.

⁵ Cf. Rep. of the Fund for the Relief of the Widows and Children of Burgh and Parochial Schoolmasters in Scotland, 1912, pp. xiv ff., 17.

⁶ See p. 27.

No doubt it is very desirable to supplement teachers' pensions by pensions for teachers' families, but the matter is of considerably less importance in Great Britain and the United States than in continental Europe, because the teaching bodies in the former countries are composed much more largely of women and are much more largely celibate in character. Moreover, pensions for widows and orphans have less potency for promoting educational efficiency and economy than pensions for teachers. So far as teachers with families are concerned, the former pensions are doubtless just as effective as the latter in promoting professional stability, perhaps more so; but in the matter of facilitating the retirement of incapacitated and superannuated teachers, pensions for widows and children are plainly of comparatively small importance.

BIBLIOGRAPHY.

SINGLE PUBLICATIONS.

- Balfour Graham. The educational systems of Great Britain and Ireland. 2d ed. 1903. 307 p.
- Board of education. Superannuation pamphlet. 1911. 30 p.
- The education acts (England and Wales) 1904. 172 p.
- Graham, J. Edward. A manual of the acts relating to education in Scotland. New ed. 1911. 687 p.
- Greenough, James C. The evolution of the elementary schools of Great Britain. 1903. 265 p.
- Kerr, John. Scottish education, school and university. 1910. 442 p.
- London county council. Regulations with regard to the education service, II (Teachers in London schools), Part I. 1908. 90 p.
- Superannuation of teachers. (Extracts from the minutes of proceedings of the council, November 8, 1910) 1910. 37 p.
- Lowell, A. Lawrence. The government of England. 1908. 2 vols.
- National union of teachers. Newcastle branch. Newcastle-on-Tyne teachers' superannuation guide. 1912. 56 p.
- Newland, H. Osman. Local government handbook on education. 1912. 354 p.
- Organ, T. A. The law relating to schools and teachers. 1900. 316 p.
- Sandiford, Peter. The training of teachers in England and Wales. 1910. 168 p.
- Scotland. Education department. Report by the actuaries . . . on the preparation of the superannuation scheme for teachers. 1911. 16 p.
- Rules . . . for carrying into effect the teachers' superannuation scheme. 1912. 8 p.
- Superannuation pamphlet. 1911. 35 p.
- Superannuation scheme for teachers. 1911. 11 p.
- Second report by Her Majesty's commissioners appointed to inquire into the schools in Scotland. 1867. clxxxv, 112 p.
- The statutory rules and orders (United Kingdom) revised to December 31, 1903. 1904 13 vols.
- Villson, W. R. A practical guide to the law of education. 1903. 732 p.
- Voxall, J. H. and Gray, Ernest. The handbook of education. 1907. 587 p.

PERIODICAL PUBLICATIONS.

- Board of education. Annual report. 1899 to present.
- Code of regulations for day schools (Scotland) Annual. 1873 to present.
- Code of regulations for public elementary schools (England and Wales). Annual. 1873-1906.
- Code of regulations for public elementary schools in England. Annual. 1907 to present.
- Code of regulations for public elementary schools in Wales. Annual. 1907 to present.
- Committee of council on education. Minutes. Annual. 1839-1858.
- Committee of council on education. Report. Annual. 1858-1873.
- Committee of council on education (England and Wales). Report. Annual. 1873-1899.

- Committee of council on education in Scotland. Report. Annual. 1873 to present.
- Journal of education. Monthly. 1869 to present.
- London county council. Minutes of proceedings. Weekly. 1904 to present.
- Education committee. Minutes of proceedings. Weekly. 1904 to present.
- London county council gazette. Weekly. 1905 to present.
- London school board. Annual report. 1886–1903.
- National union of teachers. Annual report. 1871 to present.
- Benevolent and orphan fund. Annual report. 1878 to present.
- Parliamentary papers. Annual. 1801 to present.
- Public general statutes (United Kingdom). Annual. 1866 to present.
- “The red code.” (Issued by National union of teachers.) Annual. 1893 to present.
- Return showing: (I) A list of day schools aided from parliamentary grant, etc.,
(II) Summarized statistics of day schools in receipt of annual grants, etc. (Issued
by Scotch education department.) Annual. 1878 to present.
- School government chronicle Weekly. 1871 to present.
- Statistics of public education in England and Wales. Annual. 1903 to present.
- Statutes of the United Kingdom of Great Britain and Ireland. Annual. 1807 to 1869.
- Statutory rules and orders. Annual. 1904 to present.
- Teachers' provident society. Annual report. 1877 to present.

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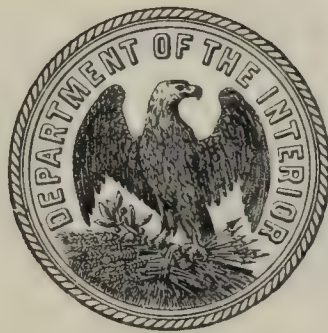
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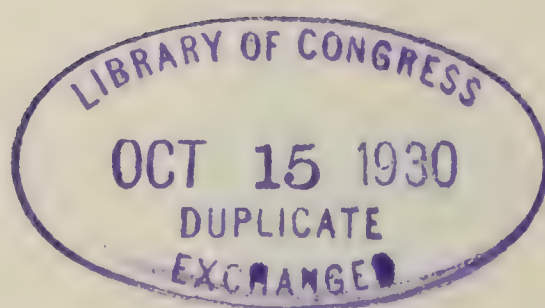


A LIST OF BOOKS SUITED TO A HIGH-SCHOOL LIBRARY

Compiled by the University High School
Chicago, Ill.



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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,

Washington, D. C., April 22, 1913.

SIR: Work in American high schools is no longer confined to the textbooks alone. In all subjects there is a demand for supplementary texts and wider reading. Most high schools have libraries to which they add from time to time as their resources will permit; others draw on our public libraries in the cities and towns in which they are located. Both because the library funds are small and because teachers and pupils should be protected against wasting their time on inferior books, there is need for well-selected lists of books helpful in studying and teaching the several high-school subjects. The lists herewith transmitted have been made with much care by the librarian and instructors of the University High School, which is under the direction of the College of Education of the University of Chicago. It is not claimed for it that it is perfect or exhaustive, but it will be very helpful to librarians, principals, and others whose duty it is to select and purchase books for high-school libraries. I therefore recommend that it be published as a bulletin of this bureau for distribution among librarians and public, private, and parochial high schools.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

A LIST OF BOOKS SUITED TO A HIGH-SCHOOL LIBRARY.

INTRODUCTION.

The following list of books, suited to a high-school library, was compiled by the various departments of the University High School, Chicago, to systematize in its own library the accessions from year to year. It is published with the hope that it will be of value to other schools.

The list differs from others of similar character in that it is not compiled from the librarian's point of view, but from that of the departments concerned, each contributing those titles which from experience have proved themselves of greatest value. An attempt has been made to select the latest editions, since they will be in print longer; to choose the least expensive works which will give full service, and to select those most attractive to the high-school mind. Thus in some lists textbook editions have been carefully avoided because to many students the appearance of the studied textbook is repellant. Well-illustrated editions have often been listed when the illustrations aid the interest in or the understanding of the text. Often the more expensive editions have been listed because of their great value to the student, though they have seldom been starred. No work has been included which has not seemed of real value to a proportion of the student body.

The course of study develops the need of the book. This list is based upon the present curriculum in the University High School. As that curriculum is not vitally different from the course of the majority of high schools, the list may be of general value. The list does not represent a minimum of the books necessary for effective work, neither is it all-inclusive. Rather, it indicates the proportion of a well-stocked, practical library. Its greatest value lies, perhaps, in the fact that it forms a systematized basis for building up a working library vital to the life of the school.

To indicate the value of a book a system of stars has been used. One star indicates that the work is of unusual value; two or more emphasize this worth. The starred titles alone are not considered sufficient for a well-stocked library, though they suggest books suitable for early orders.

The committee compiling the list is as follows:

Mr. Theodore B. Hinckley, *chairman*, department of English.
 Miss S. Louise Mitchell, librarian of the University High School.
 Miss Lydia M. Schmidt, department of German.
 Mr. Ernest R. Breslich, department of mathematics.
 Mr. Emery Filbey, department of woodwork.
 Mr. Harry F. Scott, department of Latin.
 Mr. W. L. Eikenberry, department of botany.
 Mr. A. F. Barnard, department of history.
 Miss J. H. Snow, department of home economics.
 Mr. E. S. Bishop, department of physics.

[Date of publication is omitted in imprints of books. In cases where two or more books having the same publisher are listed in succession, the name of the publisher is given only with the first title.]

REFERENCE BOOKS.

A. ENCYCLOPEDIAS.

Appleton's new practical encyclopedia. 6 v. New York, Appleton. (\$18.)
 Britannica yearbook.
 Encyclopedia Britannica. 11th ed. 29 v. New York, University press. (\$5 each.)
 The new international encyclopedia. 20 v. New York, Dodd, Mead & co. (\$85.)

B. DICTIONARIES.

1. AMERICAN.

Century dictionary and encyclopædia, with a new atlas of the world. New ed.
 New York, Century. (\$75.)
 A standard dictionary of the English language. New York, Funk & Wagnalls. (\$12.)
 Standard dictionary. Students' ed. Funk & Wagnalls. (\$2.50.)
 Webster, Noah. New international dictionary. Springfield, Mass., Merriam. (\$12.)

2. GERMAN.

Flugel, K. F. A., Schmidt, I., and Tanger, G. A German and English dictionary.
 2 v. New York, Brentano. (\$5.)
 James, William, *comp.* Dictionary of the German and English languages. New
 York, Macmillan. (\$1.50.)
 Muret, Edward, and Sanders, D. Encyclopædic English-German and German-English
 dictionary. abr. ed. Berlin-Schöneberg, Langenscheidt. (\$5.)

3. FRENCH.

Elwall, Alfred. Dictionnaire Anglais-français, et français-anglais. Paris, Delagrave.
 (\$3.)
 Hatzfield and Darmesteter. Dictionnaire général de la langue française. 2 v. Dela-
 grave. (\$7.50.)
 For advanced students and teachers.
 Larousse, P. A. Petit illustré nouveau dictionnaire encyclopédique. Paris, Larousse.
 (\$1.25.)
 Spiers, A., and Surenne, Gabriel. Standard pronouncing dictionary of the French and
 English languages. School ed. New York, Appleton. (\$1.50.)

4. LATIN.

- Harper's Latin dictionary. New York [etc.], American book co. (\$6.50.)
 Lewis, C. T. Elementary Latin dictionary. American book co. (\$2.)
 Smith, William, *and* Hall, T. D. Copious and critical English-Latin dictionary.
 American book co. (\$4.)

C. MISCELLANEOUS.

1. BIOGRAPHY.

- Adams, O. F. Brief handbook of English authors. Boston, Houghton Mifflin co.
 (75 cents.)
 ——— Dictionary of American authors. Houghton Mifflin co. (\$3.)
 Century cyclopædia of names. New York, Century.
 Forms vol. 11 of Century dictionary.
 Cousins, J. W. A short bibliographical dictionary of English literature. New York,
 Dutton. (Everyman's library.) (35 cents.)
 Incomplete but in convenient and cheap form.
 Hastings, James, *and others, eds.* Dictionary of the Bible. New York, Scribner.
 (\$5.)
 Lee, Sidney, *ed.* Dictionary of national biography. Index and epitome. New
 York, Macmillan. (\$6.25.)
 Thomas, Joseph. Universal pronouncing dictionary of biography and mythology.
 New ed. 2 v. Philadelphia, Lippincott. (\$15.)
 Warner, C. D., *and others, eds.* Library of the world's best literature. New York,
 Warner library co. (\$77.50.)
 Contains excellent introductory biographical and critical sketches.

2. LITERATURE AND ENGLISH.

- Botta, Mrs. A. C. L. Handbook of universal literature. Boston, Houghton Mifflin
 co. (\$2.)
 Garnett, Richard, *and* Gosse, E. D. English literature—an illustrated record. 4 v.
 London, Macmillan. (\$20.)
 The Holy Bible. The King James version. (Various prices.)
 ——— The Revised version. Stand. ed. New York, Nelson. (Various prices.)
 ——— Modern reader's Bible. New York, Macmillan. (\$2.)
 Ryland, Frederick. Chronological outline of English literature. Macmillan. (\$2.)
 Warner, C. D., *and others, eds.* Library of the world's best literature. New York,
 Warner library co. (\$77.50.)
 Whitcomb, S. L. Chronological outline of American literature. New York, Mac-
 millan. (\$1.50.)

SYNONYMS.

- Crabb, George. English synonyms. New York, Harper. (\$1.25.)
 Fernald, J. C. English synonyms and antonyms. New York, Funk & Wagnalls.
 (\$1.50.)
 Roget, P. M. Thesaurus of English words and phrases. New York, Longmans,
 Green & co. (\$1.60.)
 Smith, J. C. Synonyms discriminated. New York, Holt. (\$2.)

QUOTATIONS.

- Bartlett, John. Familiar quotations. Boston, Little, Brown & co. (\$3.)
 Indexed by authors and by most important words.
 Hoyt, J. K., *comp.* Cyclopædia of practical quotations . . . New York, Funk &
 Wagnalls. (\$6.)
 Indexed by subjects.

ALLUSIONS, ETC.

- Brewer, E. C. Dictionary of phrase and fable. Philadelphia, Lippincott. (\$1.50.)
 ——— Reader's handbook of allusions, references, plots, and stories. Lippincott. (\$3.50.)
- Chambers, Robert. Book of days. 2 v. Lippincott. (\$5.)
- Reddall, H. F. Fact, fancy, and fable. Chicago, McClurg. (\$2.50.)
 Contains pseudonyms, stage names, nicknames, folk sayings, memorable days, etc.
- Wheeler, W. A. Explanatory and pronouncing dictionary of the noted names of fiction. Boston, Houghton Mifflin co. (\$2.)

HISTORY AND GEOGRAPHY.

- Bliss, W. D. P., *and* Binder, R. N. New encyclopedia of social reform. New York, Funk & Wagnalls. (\$7.50.)
- Century atlas of the world. New York, Century.
 Vol. 12 of Century dictionary.
- Cornish, F. W. Concise dictionary of Greek and Roman antiquities, based on Smith's fuller work. London, Murray. (\$4.)
- Dow, E. W. Atlas of European history. New York, Holt. (\$1.50.)
- Gardiner, S. R. School atlas of English history. New York, Longmans, Green & co. (\$1.25.)
- Heilprin, Louis. Historical reference book. New York, Appleton. (\$3.)
- Lalor, J. J. Cyclopædia of political science, political economy and of political history of the United States. New York, Merrill. (\$5 each.)
- Larned, J. N. History for ready reference from the best historians and specialists. 7 v. Lynn, Mass., Nichols. (\$5 each.)
- Library atlas of the world. Chicago [etc.], Rand-McNally & co. (\$25.)
- Lippincott's new gazetteer. Philadelphia, Lippincott. (\$10.)
 A complete geographical dictionary of the world.
- Low, S. J., *and* Pulling, F. S. Dictionary of English history. London, Cassell. (\$2.50.)
- Nichol, John. Tables of ancient literature and history: B. C. 1500–200 A. D. Glasgow, Maclehose. (\$1.50.)
 ——— Tables of European history, literature, science and art from 200 A. D.–1909, and of American history, literature, and art. Maclehose. (\$2.)
- Peck, H. T., *ed.* Harper's dictionary of classical literature and antiquities: A. B. C. New York, Harper. (\$6.)
- Ploetz, Carl. Epitome of ancient, medieval, and modern history. Boston, Houghton Mifflin co. (\$3.)
- Seyffert, Oskar. Dictionary of classical antiquities. New York, Macmillan. (\$2.25.)
- Smith, *Sir William, and others.* Dictionary of Roman and Greek antiquities. 2 v. Boston, Little, Brown & co. (\$14.)

ANNUALS, ETC.

- American yearbook. New York, Appleton. (\$3.50.)
- Brittanica yearbook. *See* Encyclopedias.
- Daily news almanac. Chicago, Daily news. (40 cents.)
 Valuable for city and state information.
- New international yearbook. *See* Encyclopedias.
- Statesman's yearbook. New York, Macmillan. (\$3.)
 Information about all the countries of the world.
- Studio yearbook. *See* Art.
- Tribune almanac and register. New York, Tribune co. (25 cents.)
 Gives statistics for the United States only.

United States Government publications. *See* Commercial geography.

Who's who. New York, Macmillan. (\$2.50.)

The annual biographical dictionary of prominent people in England and America.

Who's who in America. Chicago, Marquis. (\$3.50.)

Reissued biennially. A biographical dictionary of noted living men and women of the United States.

World almanac. New York, World co. (60 cents.)

United States and foreign statistics.

BIBLIOGRAPHY.

Baker, E. A. History in fiction. 2 v. London, Routledge. (\$1.50 each.)

Granger, Edith. An index to poetry and recitation. Chicago, McClurg. (\$4.50.)

NOTE.—Many of the above-mentioned books can be bought from second-hand dealers for much less than the regular prices.

HISTORY.

(Books in the Everyman's library should be ordered in "library cloth.")

STUDY AND TEACHING OF HISTORY.

Bourne, H. E. The teaching of history. New York, Longmans, Green & co. (\$1.50.)

This book is written by an American teacher and applies to conditions in our schools. Comprehensive in its scope.

Vincent, J. M. Historical research, 1912. New York, Holt.

The work of an American scholar.

GENERAL WORKS.

Andrews, C. M., Gambrill, J. M., and Tall, L. L. Bibliography of history for schools and libraries, 1910. New York, Longmans, Green & co. (\$1.)

Contains descriptive and critical annotations.

Baker, E. A. History in fiction. 2 v. New York, Dutton. (75 cents each.)

A dictionary of historical novels and romances. Vol. I, English. Vol. II, American and foreign.

Cunningham, W. European civilization in its economic aspect, 1898-1900. 2 v. Cambridge. (\$1.25 each.)

Very valuable for the teacher.

Freeman, E. A. Historical geography of Europe. New York, Longmans, Green & co. (\$2.)

Atlas to accompany the above (65 maps, \$4). The standard work on this subject.

Larned, J. N. History for ready reference. 7 v. Springfield, Mass., Nichols.

Covers the whole field of history. The arrangement is alphabetical. Original edition published in 5 volumes, 1895. Vol. VI, 1901, supplement, covering years 1895-1901. Vol. VII, supplement, covering years 1901-1910.

THE PREHISTORIC AGE.

Clodd, Edward. The story of the alphabet. New York, Appleton. (35 cents.)

Deniker, Joseph. The races of man. New York, Scribner. (\$1.50.)

Haberlandt, Michael. Ethnology. Temple primers. New York, Macmillan. (50 cents.)

Hoernes, Dr. Primitive man. Temple primers. Macmillan. (50 cents.)

Jenks, Edward. History of politics. Temple primers. Macmillan. (50 cents.)

Mason, O. T. Woman's share in primitive culture. New York, Appleton. (\$1.75.)

Shaler, N. S. Domesticated animals. New York, Scribner. (\$2.50.)

Taylor, I. Origin of the Aryans. 2d ed. Chicago, Scott, Foresman & co. (\$1.50.)

Tylor, E. B. Anthropology. New York, Appleton. (\$2.50.)

ANCIENT HISTORY.

HIGH-SCHOOL TEXTS.

ANCIENT.

- **Botsford, G. W.** History of the ancient world. New York, Macmillan. (\$1.50.)
Up-to-date, comprehensive, compact, and well illustrated. This book is based on the author's "Orient, Greece, and Rome," but is very largely rewritten.
- Goodspeed, G. S.** History of the ancient world. New York, Scribner. (\$1.50.)
Advanced, scholarly. Continuity and unity of history emphasized. Strong on the oriental and early Greek periods. Has good summaries. The revised edition (1912) is considerably enlarged and improved. The treatment of the Hellenistic period is full and authoritative.
- **Seignobos, Charles.** History of ancient civilization. Scribner. (\$1.25.)
Tr. from the French. Furnishes background for the ordinary political narrative. Interesting.
- **West, W. M.** History of ancient world. Boston, Allyn & Bacon. Illus. (\$1.50.)
Viewpoint modern. Suggestive, rich in comparison and inference. Strong on constitutional development. Discriminating directions for reading and reference work.
- Westermann, W. E.** The story of ancient nations. New York, Appleton. (\$1.50.)
Just out. A brief sketch. Elementary.

GREEK.

- Botsford, G. W.** History of Greece. New York, Macmillan. (\$1.10.)
Written from a first-hand knowledge of the sources. Has the atmosphere of Greek life. Fine illustrations.
- *Bury, J. B.** Students' history of Greece. Macmillan. (\$1.10.)
A condensation of Bury's larger history. A good reference book for the older pupils.
- **Morey, W. C.** Outlines of Greek history. New York [etc.], American book co. Illus. (\$1.)
Well organized. Has good maps and plans.
- Myers, P. V. N.** History of Greece. Boston, Ginn. (\$1.25.)
A good narrative history. Interesting.
- Shorey, Paul.** History of Greece. (Announced.) New York, Holt.
- **Zimmern, Alice.** History of Greece. New York, Longmans, Green & co. (\$1.)
An English book. Simple style. Suitable for young pupils. Neglects the broader aspects of history.

ROMAN.

- *Abbott, F. F.** History of Rome. Chicago, Scott, Foresman & co. Illus. (\$1.)
Accompanied by valuable teacher's manual. Advanced, scholarly, strong on the empire.
- Botsford, G. W.** History of Rome. New York, Macmillan. Illus. (\$1.10.)
See comment above.
- **Morey, W. C.** Outlines of Roman history. New York [etc.], American book co. Illus. (\$1.)
See comment above.
- **Seignobos, Charles.** History of the Roman people. New York, Holt. Illus. (\$1.25.)
Full narrative. Graphic style. Anecdotal. Good chapters on social life and the history of civilization.

SECONDARY WORK.

ORIENTAL.

- Hommel, Fritz.** Civilization of the East. Temple primers. New York, Macmillan. (50 cents.)
- *Myres, J. L.** The dawn of history. New York, Holt. (Home university library.) (50 cents.)
The author is an archæologist who has traveled extensively in the East. His book brings out vividly the shaping influence of geographic conditions.
- Westermann, W. L.** The ancient world to 49 B. C. (Announced.) New York, Century.

EGYPT.

- **Baikie, James.** Story of the Pharaohs. New York, Macmillan. Illus. (\$2.)
Recently published. Popular in treatment. Dramatic style.
- Breasted, J. H.** History of Egypt. New York, Scribner. (\$5.)
Also to be had in cheaper form from Scribner, without illustrations. Price, \$1.25.
The author is an Egyptologist. The book is exceptionally well written and illustrated.

BABYLONIA AND ASSYRIA.

- Ragozin, Z. A.** Story of Chaldea. New York, Putnam. (\$1.50.)
——— Story of Assyria. Putnam. (\$1.50.)
Popular, entertaining. Not up to date, but usable in parts.
- Winckler, Hugo.** History of Babylonia and Assyria. New York, Scribner. (\$1.50.)
New translation, 1907. Tr. from the German. A scholarly yet readable work.

THE HEBREWS.

- Hosmer, J. K.** Story of the Jews. New York, Putnam. (Story of the nations.) (\$1.50.)
A popular account of the fortunes of the Jews in all ages.
- Kent, C. F.** History of the Hebrew people. New York, Scribner. 2 v. (\$1.25 each.)

THE PHOENICIANS.

- Rawlinson, George.** Story of Phoenicia. New York, Putnam. (Story of the nations.) (\$1.50.)
A readable account of a remarkable people.

PERSIA.

- Benjamin, S. G. W.** Story of Persia. New York, Putnam. (Story of the nations.) (\$1.50.)
- Ragozin, Z. A.** Story of Media, Babylonia, and Persia. Putnam. (Story of the nations.) (\$1.50.)

GREECE.

- *Bury, J. B.** History of Greece to the death of Alexander. New York, Macmillan. (\$1.90.)
Vigorous, scholarly, the best one-volume account.
- Murray, Gilbert.** Greece. New York, Holt. (Home university library.)
Announced for publication.
- *Schuckburgh, E. S.** Greece, to A. D. 14. New York, Putnam, 1905. (\$1.50.)
Strong on the Hellenistic period. Recent, popular, with elaborate treatment of literature, art, philosophy, etc.

STANDARD WORKS.

GREECE.

- Abbott, Evelyn.** History of Greece. New York, Putnam. (\$2.25 each.)
Three volumes already issued, the last volume bringing the narrative to the "fall of the thirty" at Athens. Emphasizes the military side of history.
- Curtius, Ernest.** History of Greece. New York, Scribner. (\$2 each.)
Translated from the German. Strong on the cultural side. Especially valuable for Greek geography.
- Grote, George.** History of Greece. 10 v. London, Murray. (\$1.75 each.)
In 12 v. Cloth. New York, Dutton. (Everyman's library.) (35 cents each.) Very full. The original literature cited in copious notes. Written by an Englishman in sympathy with Greek political life.
- Holm, Adolph.** History of Greece. 4 v. New York, Macmillan. (\$2.50 each.)
Translated from the German. More recent than Curtius. Well proportioned narrative. Convenient analysis of the sources at the end of each chapter. The fourth volume covers the Hellenistic period.

ROME.

Bury, J. B. The students' empire (to 180 A. D.). New York [etc.], American book co. (\$1.50.)

Full narrative. Not so well written as Bury's Greece.

Ferrero, Guglielmo. History of Rome (133 B. C. to 14 A. D.). 5 v. New York, Putnam. (\$1.75 each.)

A recent work. Brilliant style. Not always trustworthy. Emphasizes the social and economic elements.

Fowler, W. W. Rome (to 180 A. D.). New York, Holt. (Home university library.) (50 cents.)

Running comment on the facts of history by a great classical scholar.

Gibbon, Edward. History of the decline and fall of the Roman Empire (180 A. D. to 1453 A. D.) 7 v. Edited by Bury. New York, Macmillan. (\$2 each.)

May be obtained in (Everyman's library) 6 v. Library cloth; price, 35 cents each. Bury's is the best edition of this great masterpiece.

*How, W. W., and Leigh, H. D. History of Rome to the death of Caesar. New York, Longmans, Green & co. (\$2.)

Well organized. Convenient for reference. Useful illustrations.

Ihne, Wilhelm. History of Rome (to 81 B. C.). 5 v. Longmans, Green & co. (\$2.35 each.)

English edition with notes. Written by a careful scholar. Corrective to Mommsen's political theories.

*Jones, H. S. The Roman empire to 476 A. D. New York, Putnam. (\$1.50.)

A brief sketch. Clear and interesting. Based on the results of recent investigation.

Merivale, Charles. History of the Romans under the empire (to 180 A. D.). 7 v. New York, Appleton. (\$2 each.)

Link between Mommsen and Gibbon. Clear and full narrative. Conventional in arrangement and treatment.

Mommsen, Theodor. History of Rome (to the death of Caesar). 5 v. New York, Scribner. (\$2.50 each.)

Published in 4 volumes. Dutton. (Everyman's library.) 35 cents each.

Ingenious, suggestive. Especially admirable are the chapters on the history of civilization. The entire lack of references to the sources is a serious defect.

*Pelham, H. F. Outlines of Roman history (to the fall of Rome). New York, Putnam. (\$1.75.)

A fine philosophical survey. For mature students.

SPECIAL EPOCHS OR PERIODS.

Church, A. J. Story of Carthage. New York, Putnam. (Story of the nations.) (\$1.50.)

Freeman, Edward. Story of Sicily. Putnam. (Story of the nations.) (\$1.50.)

Grant, A. J. Greece in the age of Pericles. New York, Scribner. (\$1.25.)

Ihne, Wilhelm. Early Rome. Scribner. (\$1.)

Mahaffy, J. P. Alexander's empire. New York, Putnam. (Story of the nations.) (\$1.50.)

SOURCES—HISTORICAL.

ORIENTAL.

Bible. The modern readers Bible. Ed. by Moulton. New York, Macmillan. (\$2.)

Breasted, J. H. Ancient records of Egypt. 5 v. Chicago, University of Chicago press. (\$3.40 each.)

Harper, R. F. Assyrian and Babylonian literature. New York, Appleton. (\$6.)

Josephus, Flavius. Works. Tr. by Whiston. 5 v. (Bohn ed.) New York, Macmillan. (\$1 each.)

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- Abbott, F. F. A short history of Rome. Chicago, Scott, Foresman & co. (\$1.)
- Ferrero, Guglielmo. Greatness and decline of Rome. v. 2, Julius Cæsar. New York, Putnam. (\$2.50.)
- Pelham, H. F. Outlines of Roman history. Putnam. (\$1.75.)
- Shuckburgh, E. S. History of Rome for beginners. New York, Macmillan. (90 cents.)
- History of Rome to the battle of Actium. Macmillan. (\$1.75.)

PUBLIC AND PRIVATE LIFE.

- Abbott, F. F. The common people of ancient Rome. New York, Scribner. (\$1.50.)
- History and description of Roman political institutions. Boston, Ginn. (\$1.50.)
- Society and politics in ancient Rome. New York, Scribner. (\$1.25.)
- Fowler, W. W. Social life at Rome. New York, Macmillan. (\$1.70.)
- Johnston, H. W. Private life of the Romans. Chicago, Scott, Foresman & co. (\$1.50.)
- Thomas, Emile. Roman life under the Cæsars. New York, Putnam. (\$1.75.)

ART AND ANTIQUITIES.

- Crawford, F. M. "Ave Roma immortalis." New York, Macmillan. (\$2.50.)
- Lanciani, R. A. Ancient Rome in the light of recent discoveries. Boston, Houghton Mifflin co. (\$6.)
- The destruction of ancient Rome. New York, Macmillan. (\$1.50.)
- The ruins and excavations of ancient Rome. Boston, Houghton Mifflin co. (\$4.)
- Mau, August. Pompeii, its life and art. New York, Macmillan. (\$2.50.)
- Platner, S. B. Topography and monuments of ancient Rome. Boston, Allyn & Bacon. (\$3.)

CLASSICAL PROSE AND VERSE.

- Homer. Iliad. Done into English verse by Lang, Leaf and Myers. New York, Macmillan. (80 cents.)
- Odyssey. Tr. into English prose by Palmer. Boston, Houghton Mifflin co. (\$1.)
- Peck, H. T., and Arrowsmith, R. Roman life in Latin prose and verse. New York [etc.], American book co. (\$1.50.)
- Plutarch. Lives. Tr. by Stuart and Long. 4 v. New York, Macmillan. (\$1 each.)

MODERN FICTION.

- Becker, W. A. Gallus; or, Roman scenes in the time of Augustus. New York, Longmans, Green & co. (\$1.25.)
- Davis, W. S. A friend of Caesar. New York, Macmillan. (\$1.50.)
- Lytton, E. G. E. L. (Bulwer-Lytton.) The last days of Pompeii. Boston, Little, Brown & co. (\$1.)
- Pater, Walter. Marius, the Epicurean. New York, Macmillan. (\$2.25.)

ESSAYS, BIOGRAPHY, AND MISCELLANY.

- Boissier, Gaston. Cicero and his friends. New York, Putnam. (\$1.75.)
- Caesar. De bello Gallico. Books 1-7. Introduction and notes by Stock. 2 v. London, Frowde (Clarendon press). (v. 1, \$1.25; v. 2., \$1.50.)
- Dodge, T. A. Caesar. Boston, Houghton Mifflin co. (\$2.)

- Froude, J. E. *Caesar; a sketch.* New York, Harper. (60 cents.)
 Gayley, C. M. *Classic myths in English literature.* Boston, Ginn.
 Glover, T. R. *Studies in Vergil.* London, Arnold. (\$3.)
 Holmes, T. R. *Ancient Britain and the invasions of Julius Caesar.* London, Frowde (Clarendon press). (\$6.75.)
 ——— *Caesar's conquest of Gaul.* New York, Macmillan. (\$2.)
 Macaulay, T. B. *Lays of ancient Rome.* New York, Longmans, Green & co. (\$1.25.)
 Mackail, J. W. *Latin literature.* New York, Scribner. (\$1.25.)
 Miller, F. J. *Two dramatizations from Vergil. Dido and the fall of Troy.* Chicago University of Chicago press. (\$1.)
 Sellar, W. Y. *Roman poets. Vergil.* London, Frowde (Clarendon press). (\$2.25.)
 Sihler, E. G. *Annals of Caesar.* New York, Stechert. (\$1.75.)
 Strachan-Davidson, J. L. *Cicero and the fall of the Roman republic.* New York Putnam. (\$1.50.)

FRENCH.

FIRST YEAR READING (ARRANGED IN ORDER OF DIFFICULTY).

- Snow and Lebon. *Easy French.* Boston, Heath. (60 cents.)
 Lazare, Jules. *Lectures faciles.* Boston, Ginn. (30 cents.)
 ——— *Premières lectures en prose et en vers.* Ginn. (35 cents.)
 Foa, Eugénie. *Le petit Robinson de Paris.* New York [etc.], American book co. (45 cents.)
 Mairet, Jeanne. (*pseud.*) *La petite princesse.* Boston, Heath. (30 cents.)
 ——— *La tâche du petit Pierre.* Heath. (30 cents.)
 Halévy, Ludovic. *L'Abbé Constantin.* Heath. (30 cents.)
 La Brète, Jean de. *Mon oncle et mon curé.* Heath. (30 cents.)
 Malot, Hector. *Sans famille.* Heath. (45 cents.)
 Dumas, Alexandre. *Monte-Christo.* New York, Holt. (75 cents.)

SECOND YEAR READING.

- About, Edmond. *Roi des montagnes.* Boston, Heath. (45 cents.)
 Daudet, Alphonse. *Trois contes.* Heath. (20 cents.)
 Dumas, Alexandre. *L'évasion du Duc de Beaufort.* Heath. (30 cents.)
 ——— *Les trois mousquetaires.* Heath. (45 cents.)
 ——— *La tulipe noire.* Heath. (45 cents.)
 Hugo, Victor. *La chute.* New York [etc.], American book co. (35 cents.)
 ——— *Waterloo.* New York, Crowell. (75 cents.)
 Labiche, E. M. *La grammaire et le Baron de Fourchevif.* Boston, Ginn. (35 cents.)
 ——— *Le voyage de M. Perrichon.* Ginn. (30 cents.)
 ——— *and Delacour. Les petits oiseaux.* New York, Holt. (20 cents.)
 ——— *and Martin, M. R. La poudre aux yeux.* Boston, Heath. (30 cents.)
 Lazare, Jules. *Contes et nouvelles. 1st and 2d series.* Boston, Ginn. (35 cents each.)
 Mérimée, Prosper. *Colomba.* New York [etc.], American book co. (45 cents.)
 Sardou, Victorien. *Les pattes de mouche.* Boston, Heath. (30 cents.)
 Verne, Jules. *Cinq semaines en ballon.* Paris, Hetzel. (6 fr.)
 ——— *La ville flottante.* New York, Holt. (40 cents.)
 ——— *Vingt mille lieues sous les mers.* Boston, Heath. (45 cents.)
 Vigny, Alfred de. *Le cachet rouge.* Heath. (20 cents.)

THIRD YEAR.

- Audoux, Marguerite. Marie Claire. Paris, Charpentier. (75 cents.)
 Augier, Emile. Le gendre de M. Poirier. Boston, Heath. (35 cents.)
 Balzac, Honoré de. Eugénie Grandet. Heath. (80 cents.)
 Banville, Théodore de. Gringoire. Boston, Allyn & Bacon. (36 cents.)
 Buffum, D. L. French short stories. New York, Holt. (90 cents.)
 Canfield, A. G. French lyrics. Holt. (\$1.)
 Coppée, François. On rend l'argent. Holt. (60 cents.)
 Claudet, Alphonse. La Belle-Nivernaise. Paris, Flammarion. (70 cents.)
 — Neuf contes choisis. New York, Holt. (45 cents.)
 — Le petit chose. Paris, Charpentier. (3 fr. 50c.)
 — Tartarin de Tarascon. Paris, Flammarion. (70 cents.)
 — Tartarin sur les Alpes. Flammarion. (70 cents.)
 Dumas, Alexandre. Les trois mousquetaires. 2 v. Paris, Lévy.
 Unabridged.
 Dumas, Alexandre, *fils*. Question d'argent. Boston, Heath. (30 cents.)
 France, Anatole (*pseud.*). Le crime de Sylvestre Bonnard. New York, Holt. (80 cents.)
 — — Paris, Lévy. (70 cents.)
 — Livre de mon ami. Lévy. (70 cents.)
 Hugo, Victor. Les misérables. Boston, Heath. (80 cents.)
 Lamartine, A. M. L. de. Graziella. Heath. (35 cents.)
 — Jeanne d'Arc. Heath. (35 cents.)
 Loti, Pierre (*pseud.*). Pêcheur d'Islande. Paris, Lévy. (70 cents.)
 — Le roman d'un enfant. Lévy. (70 cents.)
 Maupassant, Guy de. Contes choisis. Edition pour la jeunesse. Ollendorff.
 Mérimée, Prosper. Quatre contes. New York, Holt. (40 cents.)
 Mévost, Marcel. Lettres à Françoise. Lemerre. (\$1.20.)
 Menan, Ernest. Ma soeur Henriette. New York, Holt. (40 cents.)
 Mostand, E. L'aiglon. New York, Brentano. (\$1.25.)
 — Cyrano de Bergerac. New York, Jenkins. (\$1.50.)
 — Les Romanesques. Paris, Charpentier et Fasquelle. (90 cents.)
 Sand, George. La mare au diable. Boston, Heath. (35 cents.)
 Sandeau, Jules. Mlle. de la Seiglière. New York [etc.], American book co. (40 cents.)
 Tancey, Francisque. Siège de Paris. New York, Heath. (45 cents.)
 Tenny, Alfred de. Servitude et grandeur militaires. Oxford university press. (60 cents.)
 Voltaire, F. M. A. Zadig. New York, Heath. (45 cents.)

REFERENCE BOOKS.

- Wall, Alfred. French-English and English-French. 2 v. (\$2.)
 Watzfeld, Adolphe, Darmsteter, A., and Thomas, A. Dictionnaire général de la langue française. 2 v. Paris, Delagrave. (\$2 each.)
 Heath. English-French and French-English dictionary. Boston, Heath. (\$1.50.)
 Anson, Gustave. Histoire de la littérature française. Paris, Hachette. (\$1.30.)
 Larousse, P. A. Petit Larousse, illustré. Nouveau dictionnaire encyclopédique. Paris. (\$1.25.)
 Paris, Gaston, and Langlois, E. Chrestomathie du moyen âge. Paris, Hachette. (70 cents.)
 Allisson, Maurice. Morceaux choisis. Publié sous la direction de M. F. Brunetière. 3 v. Paris, Delagrave. (80 cents.)

- Rimbaud, Alfred. Histoire de la civilization contemporaine. 1 v. Paris, Colin. (\$1.)
- Histoire de la civilization française. 2 v. Colin. (\$1.60 each.)
- Villemin, Emile. Méthode naturelle de prononciation française et de phonétique pratique à l'usage des étrangers. Paris, Larousse. (75 cents.)

PERIODICALS.

- Les annales politiques et littéraires. New York, Brentano. (\$3.75.)

SUGGESTIONS FOR FURTHER READING GIVEN TO STUDENTS AT END OF THIRD YEAR.

SEVENTEENTH CENTURY.

- Bossuet, Jacques-Bénigne. Oraisons funèbres (extraits). Boston, Heath. (50 cents.)
- Corneille, Pierre. Le Cid. New York, Holt. (35 cents.)
- La Fontaine, J. B. de. One hundred fables. Boston, Ginn. (40 cents.)
- Molière, J. B. P. L'avare. Boston, Heath. (35 cents.)
- Le bourgeois gentilhomme. Heath. (30 cents.)
- Tartufe. Heath. (30 cents.)
- Racine, J. B. Athalie, Phèdre. Heath. (30 cents each.)
- Sévigné, Mme. de R. C. Lettres (choix). New York [etc.], American book co. (40 cents.)

EIGHTEENTH CENTURY.

- Voltaire, F. M. A. de. Voltaire's prose. (Cohn & Woodward.) Boston, Heath. (\$1.)

NINETEENTH CENTURY.

- Balzac, Honoré de. Le cousin Pons. Boston, Heath. (80 cents.)
- Le Père Goriot. Heath. (80 cents.)
- Boissier, Gaston. Cicéron et ses amis. Paris, Hachette. (64 cents.)
- Bourget, Paul. Un Saint-Plon-Nourrit. (\$1.)
- Chateaubriand, F. R. Extraits des aventures du dernier Abencérage; Passages tirés du voyage en Amérique; d'Atala, etc. Paris, Holt. (35 cents.)
- Coulevain, Pierre de (*pseud.*). Sur la branche, etc. Paris, Lévy. (3 fr. 50c.) (70 cents.)
- Gautier, Théophile. Roman de la momie. Fasquelle. (3 fr. 50c.)
- Voyage en Espagne. Fasquelle.
- Hugo, Victor. Hernani (Matzke). Boston, Heath. (60 cents.)
- Notre Dame de Paris. Boston, Ginn. (80 cents.)
- Poems (selected—Schinz). Boston, Heath. (80 cents.)
- Question d'argent. Heath. (30 cents.)
- Ruy Blas (Garner). Heath. (65 cents.)
- Les travailleurs de la mer (Langley). Heath. (80 cents.)
- Lamartine, A. M. L. de. Méditations (Curme). Heath. (35 cents.)
- Maeterlinck, Maurice. La vie des abeilles. Paris, Charpentier. (70 cents.)
- Son théâtre. Charpentier. (70 cents.)
- Michelet, Jules. La prise de la Bastille. Paris, Lévy. (\$1.20.)
- Abridged edition published by Ginn. 20 cents.
- Musset, Alfred de. Alfred de Musset (Kuhns). Boston, Ginn. (60 cents.)
- Renan, Ernest. Vie de Jésus. Paris, Lévy. (\$1.50.)
- Taine, H. A. La Fontaine, etc. Paris, Hachette. (65 cents.)
- Vigny, Alfred de. Cinq Mars (Sankey). Boston, Heath. (60 cents.)
- Poems.

GERMAN.

[The books in this list have been chosen with a view to their suitability for supplementary reading in a three years' high-school course. Unless otherwise specified, the asterisks indicate books which contain interesting reading in especially simple German.]

FIRST YEAR.

- *Grimm, Jakob, *and* Wilhelm. *Kinder und Hausmärchen*. Ed. by Vos. New York [etc.], American book co. (45 cents.)
- Kuerber, H. A. *Märchen und Erzählungen*, I. Boston, Heath. (60 cents.)
- Meeligmann, Karl. *Altes und Neues*. Boston, Ginn. (35 cents.)

SECOND YEAR.

- Betz, Friedrich. *Deutscher Humor aus vier Jahrhunderten*. Boston, Heath. (40 cents.)
- Blüthgen, Viktor. *Das Peterle von Nürnberg*. (35 cents.)
- *Der Rügenfahrer*. Heath. In "Der Weg zum Glück," ed. by Wilhelm Bernhardt. Heath. (40 cents.)
- *Collmann, C. W. *Easy German poetry*. Boston, Ginn. (40 cents.)
- Gulda, Ludwig. *Unter vier Augen*. New York, Holt. (35 cents.)
- Herstäcker, Friedrich. *Germelshausen*. Boston, Heath. (30 cents.)
- Goebel, Ferdinand. *Rübezahl*. New York, Macmillan. (35 cents.)
- A popular collection of very well told stories.
- *Hauff, Wilhelm. *Der Zwerg Nase*. Boston, Heath. (15 cents.)
- Heyse, Paul. *L'Arrabbiata*. New York, Holt. (35 cents.)
- *Niels mit der offenen Hand*. Boston, Heath. (30 cents.)
- *Müller, Margarethe, *and* Wenckebach, Carla. *Glückauf*. Boston, Ginn. (60 cents.)
- Nichols, A. B. *Easy German reader*. New York, Holt. (40 cents.)
- *Schrakamp, Josefa. *Deutsche Heimat*. New York [etc.], American book co. (80 cents.)
- A delightful collection of short pieces of descriptive and narrative writing interspersed with selected poems. The book acquaints the pupil in very good but simple German with the various geographical divisions of modern Germany, with national and local customs, important historical events and legends.
- *Schweitzer, Charles, *and* Simonnot, Emile. *Deutsches Lesebuch für Quarta und Tertia*. Paris, Colin. (4 fr.)
- This book presents in an attractive form and in simple but excellent German, a comprehensive account of Germany; its geography, people, customs, and institutions. It consists of short descriptive sketches, legends, stories, poems, conversations, and letters. Numerous excellent illustrations. Suited to second or third year high-school pupils.
- pyri, Johanna. *Moni der Geissbub*. Boston, Heath. (25 cents.)
- *Rosenresli*. Heath. (25 cents.)
- Stern, S. M. *Aus Deutschen Meisterwerken*. New York, Holt. (\$1.20.)
- Nibelungen, Parcival, Gudrun, Tristan und Isolde*. Simple German.
- tern, Menco. *Geschichten vom Rhein*. New York [etc.], American book co. (85 cents.)
- tökl, Helene. *Alle fünf*. Boston, Heath. (30 cents.)
- *Storm, Theodor. *Immensee*. Heath. (30 cents.)
- Till Eulenspiegel. Ed. by F. Betz. Heath. (30 cents.)
- *Volkmann, Richard von (Leander, *pseud.*). *Kleine Geschichten*. Heath. (30 cents.)
- *Träumereien an französischen Kaminen*. Boston, Ginn. (40 cents.)
- Viedemann, Franz. *Biblische Geschichten*. New York, Holt. (35 cents.)
- schokke, Heinrich. *Der zerbrochene Krug*. Boston, Heath. (25 cents.)
- Very simple German.

THIRD YEAR.

- Arnold, Hans. Fritz auf Ferien. New York [etc.], American book co. (30 cents.)
- *Baumbach, Rudolf. Der Schwiegersohn. Boston, Heath. (40 cents.)
- **—— Sommermärchen. New York, Holt. (35 cents.)
- Benedix, Roderich. Der Prozess. Boston, Heath. (20 cents.)
- Ebner-Eschenbach, Marie von. Die Freiherren von Gemperlein. Heath. (30 cents.)
- **Eichendorff, Joseph von. Aus dem Leben eines Taugenichts. Heath. (45 cents.)
- Freytag, Gustav. Die Journalisten. Boston, Ginn. (45 cents.)
- Karl der Grosse. New York, Holt. (75 cents.)
- Two essays from Freytag's "Bilder aus der deutschen Vergangenheit," "Karl der Grosse," and "Aus dem Klosterleben im zehnten Jahrhundert."
- Gerstäcker, Friedrich. Irrfahrten. Boston, Heath. (45 cents.)
- Not difficult.
- **Goethe, J. W. von. Goethe's Meisterwerke. Ed. by Bernhardt. Heath. (\$1.25.)
- Specimens of Goethe's epic, lyric, and dramatic poetry. Selections from his prose writings. An excellent collection of the most attractive and interesting portions of Goethe's writings. For advanced pupils.
- Hauff, Wilhelm. Lichtenstein. Heath. (75 cents.)
- *Holly, M. B. German epics retold. New York [etc.], American book co. (60 cents.)
- Das Hildebrandlied, der Heliand, das Walthariliad, das Rolandslied, der arme Heinrich, Parzival, Lohengrin, Tristan und Isolde, das Nibelungenlied, das Gudrunlied.
- Keller, Gottfried. Kleider machen Leute. Boston, Heath. (35 cents.)
- **Klenze, Camillo von. Deutsche Gedichte. New York, Holt. (90 cents.)
- *La Motte-Fouqué, F. H. K. de. Undine. Holt. (50 cents.)
- Lessing, G. E. Minna von Barnhelm. Scott. (50 cents.)
- Lohmeyer, Julius. Der Geissbub von Engelberg. Boston, Heath. (40 cents.)
- *Mezger, Robert, and Müller, Wilhelm. Kreuz and quer durch deutsche Lande. New York [etc.], American book co. (60 cents.)
- An interesting account of a trip through Germany by two Americans. Anecdotes, stories, ballads, and songs illustrate characteristic traits or references to important historical events. Numerous good illustrations of cities and historical places and personages add to the charm of this book. Simple German.
- *Moser, Gustav von. Der Bibliothekar. American book co. (45 cents.)
- *Riehl, W. H. Burg Neideck. Boston, Heath. (35 cents.)
- Der Fluch der Schönheit. Heath. (30 cents.)
- *Rosegger, P. K. Der Lex von Gutenhag. Heath. (40 cents.)
- Saar, Ferdinand von. Die Steinklopfer. New York, Holt. (35 cents.)
- Schiller, J. C. F. von. Die Jungfrau von Orleans. Boston, Ginn. (70 cents.)
- Maria Stuart. Ginn. (75 cents.)
- *—— Wilhelm Tell. Ginn. (70 cents.)
- For advanced pupils.
- **Schrakamp, Josefa. Ernestes und Heiteres. New York [etc.], American book co. (35 cents.)
- Stories by some of the best known contemporary authors. Attractive and simple reading.
- Erzählungen aus der deutschen Geschichte. New York, Holt. (90 cents.)
- **Schweitzer, Charles, and Simonnot, Émile. Lesebuch für Sekunda, Prima und Oberprima. Paris, Colin. (4 fr.)
- A history of German culture tracing the development of German civilization in all its phases: politics, literature, philosophy, art, music, science, and industry, from the beginning to the present time. Selections of prose and poetry from the best authors give to the book also the character of an anthology. An excellent book. A variety of appropriate and pleasing illustrations. For advanced pupils.

- Seidel, Heinrich. *Leberecht Hühnchen*. Boston, Heath. (30 cents.)
- **Spanhoofd, Arnold Werner. *Aus vergangener Zeit*. New York [etc.], American book co. (50 cents.)
An interesting and useful collection of short historical sketches. Suited for somewhat advanced third-year pupils.
- **Stern, Menco. *Geschichten von deutschen Städten*. Pt. 1-2. American book co. (70 cents each.)
- *Storm, Theodor. *Pole Poppenspäler*. Boston, Heath. (40 cents.)
- **Sudermann, Hermann. *Frau Sorge*. Heath. (90 cents.)
For advanced pupils.
- Thiergen, Oskar, and Valerie. *Am deutschen Herde*. Boston, Ginn. (50 cents.)
- Wagner, Richard. *Rheingold*. Newson & co. (75 cents.)
Edited with notes and a good introduction by Richard A. von Minckwitz. (*Walküre*, Siegfried *Götterdämmerung*, *Tannhäuser*, *Lohengrin*, *Meistersinger* in preparation.)
- Wallentin, I. G. *Grundzüge der Natur lehre*. Boston, Heath. (\$1.)
- **Wildenbruch, Ernst von. *Das edle Blut*. New York. Holt. (35 cents.)
- *—— Neid. Boston, Heath. (35 cents.)

REFERENCE BOOKS.

HISTORY.

- **Henderson, E. F. *A short history of Germany*. New York, Macmillan. (\$2.50.)
- *Stoll, Hermann. *Geschichtliches Lesebuch*. Hamburg, Boysen. (*In 1 v.* \$1.65.
In 3 v. at 75 cts., 45 cts., and 50 cts.)

The author has chosen for treatment only those events which have left their impress on large periods of time. He has portrayed these vividly and shown their relation to each other. Not only the political development of Germany but religion, science, art, literature, and philosophy are included in this survey. An unusual book because of the successful presentation of the material and the simplicity of its style. For advanced pupils.

HISTORY OF LITERATURE.

- *Hosmer, J. K. *Short history of German literature*. New York, Scribner. (\$2.)
- *Keller, I. *Bilder aus der deutschen Litteratur*. Rev. ed. New York [etc.], American book co. (\$1.)

A survey of German literature during most important epochs. Summaries of chief works of each period and writer in most cases illustrated by typical quotations. Simple German. Suited to younger as well as more advanced students.

- Klee, Gotthold. *Grundzüge der deutschen Literaturgeschichte*. Bondi. (60 cents.)
- Thomas, Calvin. *The life and works of Schiller*. Students' ed. New York, Holt. (\$1.50.)

—— History of German literature. New York, Appleton. (\$1.50.)

DICTIONARIES AND ENCYCLOPEDIAS.

- Duden, Konrad. *Orthographisches Wörterbuch der deutschen Sprache*. 8th ed. Leipzig, Bibliographisches Institut. (40 cents.)
- *Flügel-Schmidt-Tanger. *Dictionary of the English and German languages*. 2 v. Braunschweig, Westermann. (\$5.)
- Ioffmann, P. F. L. *Wörterbuch der deutschen Sprache*. Leipzig, Braudstetter. (\$1.30.)
- James, William. *Dictionary of the German and English languages*. 42d ed. New York, Macmillan. (\$1.50.)
- With index. (\$2.)

- Meyer, H. J. *Handlexicon des allgemeinen Wissens*. Leipzig, Bibliographisches Institut. 6th ed. 1 v. or 2 v. in one. (\$6.60.)
- Muret, Edward, *and* Sanders, D. H. *Encyclopædic English-German, and German-English dictionary*. Abr. ed. Berlin, Langenscheidt. (\$3.75.)

MISCELLANEOUS.

- **Germanistische Gesellschaft.** University of Wisconsin. *Deutsches Liederbuch*. Boston, Heath. (75 cents.)
- This contains some of the best known and most popular German songs, including *Volkslieder* and *Studenten Lieder*, with music and explanatory and biographical notes.
- Illustrierte Monographien*. Velhagen & Klasing. (90 cents to \$1.20 each.)
- These monographs on German art, history, and geography would be a valuable addition to any high-school library.
- **Kürschner, Joseph.** *Das ist des Deutschen Vaterland!* Bibliographische Anstalt Adolf Schumann. Leipzig. Illus. (\$3.)
- Almost 1,300 pictures of German landscape, cities, architecture and people illustrate the text. A very attractive book and especially valuable for high-school students.

MAGAZINES.

- **Aus Nah und Fern*. Chicago, Francis W. Parker school press. (50 cents.)
- **Die Woche*, Scherl, Berlin. (\$5.)
- The most popular German weekly.

ENGLISH.

This list excludes the vast number of modern books dealing with material and modern thought vital to the high-school student, books which, though often pleasing in style, are not to be classed as literature. The list includes only works of acknowledged literary value and books pertaining to composition and literature. Books in *Everyman's library* should be ordered in "library cloth."

HISTORY OF LITERATURE AND ANTHOLOGY.

- Dennis, John. *Age of Pope*. New York, Macmillan. (\$1.)
- Mature and satisfactory survey of this period.
- **Garnet, Richard, *and* Gosse, Edmund, eds.** *English literature*. Macmillan. 4 v. Illus. (\$20.)
- The most attractive work for the high-school student.
- **Halleck, R. P.** *History of American literature*. New York [etc.], American book co. (\$1.25.)
- Competent textbook type.
- **Moody, W. V., *and* Lovett, R. M.** *A first view of English and American literature*. New York, Scribner. (\$1.25.)
- Excellent textbook for high schools. There are, however, many others covering the same ground.
- *Pancoast, H. S. *An introduction to American literature*. New York, Holt. (\$1.)
- Phelps, W. D. *Beginnings of the English romantic movement*. Boston, Ginn. (\$1.)
- Simple, comprehensive survey.
- Ryland, Frank. *Chronological outlines of English literature*. New York, Macmillan. (\$1.40.)
- Saintsbury, G. E. B. *Flourishing of romance and the rise of allegory*. New York, Scribner. (\$1.50.)
- Rather mature, but valuable as reference.
- *Wendell, Barrett, *and* Greenough, C. N. *A history of American literature*. Scribner. (\$1.40.)

ANTHOLOGY.

- *Cairns, W. B., *ed.* Selections from early American writers, 1607–1800. New York, Macmillan. (\$1.25.)
- **Gayley, C. M., and Young, C. C. English poetry, its principles and progress. Macmillan. (\$1.10.)
Brief introduction to each period, with illustrations; poems. Excellent.
- **Manley, John M., *comp.* English poetry, its principles and progress. Macmillan. (\$1.10.)
Brief introduction to each period with illustrations; poems. Excellent.
- **—— English prose. Boston, Ginn. (\$1.50.)
Valuable anthology, showing development of English prose.
- *Palgrave, F. T., *comp.* Golden treasury of English verse. New York, Dutton. (Everyman's library.) (35 cents.)
An excellent work; less inclusive than the Oxford book of English verse.
- *Quiller-Couch, A. T., *ed.* The Oxford book of English verse, 1250–1900. London, Frowde (Clarendon press). (\$1.90.)
Excellent. Largely lyrical.

FOLK-LORE AND LEGEND.

- **Anderson, R. B. Norse mythology. Chicago, Scott, Foresman & co. (\$2.50.)
Attractive in form and material.
- *Arthurian tales and chronicles. New York, Dutton. (Everyman's library.) (35 cents.)
- *Bulfinch, Thomas. Age of chivalry. Philadelphia, McKay. Illus. (\$1.)
Excellent for stories of Arthur.
- Age of fable. New York, Dutton. (Everyman's library.) (35 cents.)
Also see Age of fable, by same writer, published by McKay. Tales from classic and northern myths. (\$1.)
- Church, A. J. Heroes of chivalry and romance. New York, Macmillan. (\$1.75.)
- Evans, Sebastian, *tr.* High history of the Holy Grail. New York, Dutton. (Everyman's library.) (35 cents.)
- **Fairbanks, Arthur. Mythology of Greece and Rome. New York, Appleton. (\$1.50.)
- Frost, W. H. Court of King Arthur. New York, Scribner. (\$1.50.)
- *Gayley, C. M. Classic myths in English literature. Boston, Ginn. (\$1.50.)
- Joyce, P. W., *tr.* Old Celtic romances. New York, Longmans, Green & co. (\$1.25.)
Significant selection.
- Mabie, H. W. Legends every child should know. Garden city, N. Y., Doubleday, Page & co. (90 cents.)
Rather elementary than high school book.
- **Mabinogion. Knightly legends of Wales. Tr. by Lady Guest. New York, Dutton. (Everyman's library.) (35 cents.)
See also The boy's Mabinogion. Ed. by Lanier. New York, Scribner. (\$2.)
The Lanier version is perhaps more within the range of the high-school student.
- **Malory, Sir Thomas. Mort d'Arthur. 2v. Dutton. (Everyman's library.) (35 cents each.)
- *—— The boy's King Arthur. Ed. by Lanier. New York, Scribner. (\$2.)
The Morte d'Arthur for younger readers.
- *Morris, William. Early romances. New York, Dutton. (Everyman's library.) (35 cents.)
Excellent for Morris and for medieval spirit.

Newell, W. W. *King Arthur and the round table.* 2 v. Boston, Houghton Mifflin co. (\$2 each.)

*O'Sheridan, M. G., *ed.* *Gaelic folk-tales.* New York, Longmans, Green & co. (40 cents.)

Well chosen tales; style rough.

Pyle, Howard. *The merry adventures of Robin Hood.* New York, Scribner. (\$3.)
Rather youthful for any but freshmen, but very attractive.

*——— *Sir Gawain and the green knight.* Nutt. (50 cents.)
Attractive form; pocket size.

*——— *Tristan and Iseult.* 2 v. Nutt. (50 cents each.)
Edition as above.

POETRY.

The problem of starring the poetry is a difficult one, for most of the poems used in the classes can be found, though not in very attractive form, in the anthologies. Unless the teachers make an especial effort to inspire interest in verse, very little "outside" reading will be done in it. As a minimum, however, a library should possess fairly complete editions of the poets studied and as much other poetry as any few students show an interest in.

Arnold, Matthew. *Poems.* Selected by E. E. Hale, jr. Boston, Heath. (60 cents.)
——— New York, Dutton. (Everyman's library.) (35 cents.)
The poems best suited to the high school are also in Manly's English poetry.

**Bates, K. L., *ed.* *A ballad book.* Boston, Sibley. (50 cents.)
Excellent small collection.

**Beowulf. Tr. by Morris and Wyatt. New York, Longmans, Green & co. (\$2.)
Poetic but slightly affected by personalities of translators.

**——— Tr. by Childs. Boston, Houghton Mifflin co. (Riverside library series.)
(25 cents.)

Blake, William. *Poems.* New York, Dutton. (Muses' library.) (50 cents.)

Browning, E. B. *Aurora Leigh.* London, W. Scott. (Camelot series.) (35 cents.)
——— *Selected poems.* New York, Macmillan. (Pocket classics.) (25 cents.)

Browning, Robert. *Complete poetic and dramatic works.* Boston, Houghton Mifflin co. (Cambridge edition.) (\$3.)
——— *Selected poems.* 2 v. New York, Dutton. (Everyman's library.) (35 cents each.)

*——— *Selected poems.* Ed. by R. Burton. Boston, Heath. (60 cents.)

*Burns, Robert. *Poems, songs, and letters.* New York, Macmillan. (75 cents.)

——— *Poems and songs.* New York, Dutton. (Everyman's library.) (35 cents.)

Byron, G. G. N. *Poems.* 2 v. London, W. Scott. (Camelot series.) (35 cents each.)

**Chaucer, Geoffrey. *Canterbury tales.* Slightly modernized. New York, Dutton. (Everyman's library.) (35 cents.)

——— See also *The student's Chaucer*, ed. by Skeat. Oxford university. (\$1.25.)

**——— *Canterbury tales.* Duffield. (\$2.50.)
Modern rendering into English prose, by P. Mackaye.

*Coleridge, S. T. *The golden book of Coleridge.* (Selected poems.) New York, Dutton. (Everyman's library.) (35 cents.)

**Cook, A. S., and Tinker, C. B., *eds.* *Translations from old English poetry.* Boston, Ginn. (\$1.)

Examples of Anglo-Saxon poetry in excellent form and spirit.

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Garnett, J. M., *tr.* Elene, Judith, etc. Boston, Ginn. (75 cents.)

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*Goldsmith, Oliver. Poems and plays. New York, Dutton. (Everyman's library.) (35 cents.)

Also in drama list.

Gummere, F. B., *ed.* Old English ballads. Boston, Ginn. (\$1.25.)

*Gummere, F. B., *tr.* The oldest English epic. New York, Macmillan. (\$1.10.)

Contains Beowulf, Finnsburg, Waldere, etc., translated in original meters.

Keats, John. Poems. New York, Dutton. (Everyman's library.) (35 cents.)

**Kipling, Rudyard. Departmental ditties and ballads and barrack room ballads. Garden city, N. Y., Doubleday, Page & co. (\$1.50.)

**—— The seven seas. New York, Appleton. (\$1.50.)

Kipling especially appeals to the high-school mind.

*Langland, William. The vision of William Piers, concerning the plowman. (Modernized.) New York, Dutton. (35 cents.)

*Longfellow, H. W. Poems. Dutton. (Everyman's library.) (35 cents.)

—— Complete poetical works. Boston, Houghton Mifflin co. (Household edition.) (\$1.50.)

—— Tales of a wayside inn. Ed. publishing co. (25 cents.)

Lowell, J. R. Poetical works. Boston, Houghton Mifflin co. (Household edition.) (\$1.50.)

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Macaulay, T. B. Miscellaneous essays and lays of ancient Rome. New York, Dutton. (Everyman's library.) (35 cents.)

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*—— Samson agonistes. New York, Longmans, Green & co. (60 cents.)

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Rossetti, D. G. Complete poetical works. Ed. by W. M. Rossetti. Boston, Little, Brown & co. (\$1.75.)

**Scott, Sir Walter. Complete poetical works. Ed. by Norton. New York, Crowell. (\$1.50.)

**Shakespeare, William. Poems. See drama lists.

Sharp, William (Fiona Macleod, *pseud.*). Songs and poems. New York, Duffield. (\$1.50.)

These less popular poems are valuable aside from their great appeal as poetry, for their illustrations of various verse forms and devices.

Shelley, P. B. Poetical works. 2 v. 1 v. shorter poems; 1 v. longer poems. New York, Dutton. (Everyman's library.) (35 cents each.)

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- *Moulton, R. G. *World literature, and its place in general culture*. New York, Macmillan. (\$1.75.)
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- *Petrarch. *Sonnets, triumphs, and other poems*. New York, Macmillan. (Bohn edition.) (\$1.50.)
- *Plato. *The four Socratic dialogues*. Tr. by Jowett. London, Frowde (Clarendon press). (\$1.)
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- Plutarch. *Lives*. Dryden-Clough translation. 3 v. New York, Dutton. (Everyman's library.) (35 cents each.)
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- See also translation by Morris, in his Poetical works, v. 10. London, 1900.
- Verne, Jules. Twenty thousand leagues under the sea. New York, Burt. (\$1.)
- *Volsunga saga. Tr. by Magnussen and Morris. London, W. Scott. (Camelot series.) (35 cents.)
- Xenophon. Memorabilia of Socrates. London, Dent. (Temple classics.) (4 cents.)
- See also History list.

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 One of the classics of biology.
- Darwin, Francis. The life and letters of Charles Darwin. 2 v. New York, Appleton. (\$2.25 each.)
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- Harmer, S. F., and Shipley, A. E. The Cambridge natural history. 10 v. Cambridge univ. press. (\$38.50.)

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 Kellogg, Vernon W. Darwinism today. New York, Holt. (\$2.)
 Morgan, Thomas. The development of the frog's egg. New York, Macmillan. (\$1.60.)
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- *————— Man and his work. London, Black. (1s. 6d.)
- *Lyde, L. W. Man in many lands. Black. (2s. 6d.)
- An introduction to the study of geographic control.
- Merriam, C. H. Life zones and crop zones of the United States. Washington. Govt. printing office. (U. S. Department of agriculture. Biological survey. Bulletin no. 10.) (Free.)
- Mill, H. R. International geography. New York, Appleton. (\$3.50.)
- Mort, Frederick. A regional geography. London, Oliver & Boyd. (2s.)
- Reynolds, J. B. Regional geographies. London, Black. (2s. each.)
- British Isles; Europe and the Mediterranean region; Asia; The Americas; Africa and Australasia.
- Salisbury, R. D., Barrows, H. H., *and* Tower, W. S. Elements of geography. New York, Holt. (\$1.50.)
- *Semple, E. C. American history and its geographic conditions. Boston, Houghton Mifflin co. (\$3.)
- Influence of geographic environment. New York, Holt. (\$4.)
- *Shaler, N. S. Aspects of the earth. New York, Scribner. (\$2.50.)
- *————— Nature and man in America. Scribner. (\$1.50.)
- *————— Sea and land. Scribner. (\$2.50.)
- United States national conservation commission. Report. 3 v. Washington, Govt. printing office. (\$2.)
- Van Hise, C. R. The conservation of natural resources in the United States. New York, Macmillan. (\$2.)
- Wallace, A. R. Geographic distribution of animals. Macmillan. (\$10.)
- Wallace, A. R. Island life. Macmillan. (\$2.)

ATLASES.

- Bartholomew, J. G. Physical atlas, meteorology. London, Constable. (\$12.75.)
- Diercke, C., *and* Gaebler, E., *eds.* Schul-atlas. Westermann. (\$2.70.)
- An excellent physical and cultural atlas.
- Rand, McNally & co. Indexed atlas of the world. 2 v. Chicago. (\$25.)
- Atlas of the United States.

MAGAZINES.

- Bulletin of the American geographical society, New York city. (\$5.)
- Geographical journal, London. (\$5.)
- *Journal of geography, Madison, Wis. (\$1.)
- **National geographic magazine, Washington, D. C. (\$2.50.)
- Scottish geographical magazine, Edinburgh. (\$5.)
- See also notes on United States government publications under Economic or commercial geography.

ECONOMIC, OR COMMERCIAL GEOGRAPHY.

GENERAL TREATISES.

- Bartholomew, J. G. Atlas of the world's commerce. London, Newnes. (\$2.70.)
- This atlas is invaluable.
- School economic atlas. London, Frowde (Clarendon press). (2s. 6d.)

- Bogart, E. L. . Economic history of the United States. New York, Longmans, Green & co. (\$4.80.)
- Bullock, C. J. Selected readings in economics. Boston, Ginn. (\$2.25.)
- Chisholm, G. G. Handbook of commercial geography. New York, Longmans, Green & co. (\$4.80.)
- Day, Clive. A history of commerce. Longmans, Green & co. (\$2.)
- *Freeman, W. G., *and* Chandler, S. E. The world's commercial products. Boston, Ginn. (\$3.50.)
- *Gregory, R. E., Keller, A. G., *and* Bishop, A. L. Physical and commercial geography. Ginn. (\$3.)
- *Mill, H. R. International geography. New York, Appleton. (\$2.25.)
- *National conservation commission. Report. Washington, Govt. printing office. (\$1.95.)
- Salisbury, R. D., Barrows, H. H., *and* Tower, W. S. Elements of geography. New York, Holt. (\$1.50.)
- *Van Hise, C. R. The conservation of natural resources in the United States. New York, Macmillan. (\$2.)
- Yeats, John. Natural history of commerce. London, Philip & son. (6s.)

REGIONAL.

- *Barker, J. E. Great and greater Britain. New York, Dutton. (\$3.)
- *Cox, Harold. The United Kingdom and its trade. New York, Harper. (\$1.25.)
- Drage, Geoffrey. Austria-Hungary. New York, Dutton. (\$6.)
- Russian affairs. London, Murray. (\$4.)
- *Dyer, Henry. Dai Nippon, the Britain of the east. London, Blackie. (\$3.50.)
An excellent book on Japan.
- Herbertson, A. J. Commercial geography of the British Isles. London, Chambers. (\$1.50.)
- Hosie, Alexander. Manchuria, its people, resources, and recent history. New York, Scribner. (\$2.50.)
- Lyde, L. W. A geography of the British empire. London, Black. (3s. 6d.)
- Mackinder, H. J. Britain and the British seas. New York, Appleton. (\$2.)
- *Pogser, G. A. Germany and its trade. New York, Harper. (\$1.)
- *Schierbrand, Wolf von. Germany. New ed. Garden city, N. Y., Doubleday, Page & co. (\$1.)
- Stead, Alfred. Japan by the Japanese. New York, Dodd, Mead & co. (\$4.)
- Weale, B. L. P. The coming struggle in eastern Asia. New York, Macmillan. (\$3.50.)

SPECIAL SUBJECTS.

- Dabney, Charles. The cotton plant. Washington, Govt. printing office. (U. S. Department of agriculture. Office of experiment stations. Bull. no. 33.) (Free.)
- **Dondlinger, P. T. The book of wheat. New York, Orange Judd co. (\$2.)
- Edgar, W. C. The story of a grain of wheat. New York, Appleton. (\$1.)
- Hopkins, C. G. Soil fertility. Boston, Ginn. (\$2.25.)
- Johnson, E. R. The American railway transportation. New York, Appleton. (\$1.50.)
- Elements of transportation. Appleton. (\$1.50.)
- Ocean and inland water transportation. Appleton. (\$1.50.)
- King, F. H. The soil. New York, Macmillan. (\$1.50.)
- Myrick, Herbert. The American sugar industry. New York, Orange Judd co. (\$1.50.)
- The book of corn. Orange Judd co. (\$1.)
- Smith, J. R. The ocean carrier. New York, Putnam. (\$1.50.)
- *——— The story of iron and steel. New York, Appleton. (75 cents.)

- *Smith, R. E. Wheat fields and markets of the world. St. Louis, Modern miller. (\$2.15.)
- **Surface, G. T. The story of sugar. New York, Appleton. (75 cents.)
- Terry, H. L. India rubber and its manufacture. New York, Van Nostrand. (\$2.)
- *Tower, W. S. The story of oil. New York, Appleton. (\$1.)
- Transportation by water in the United States. U. S. Commissioner of corporations. (Free.)

This report contains many excellent maps.

United States. Agricultural department. Yearbooks. (Free.)

————— Forest service. Publications. (Free.)

What forestry has done—Circular 140. Status of forestry in the United States—Circular 167. Forest products of the United States—Bulletin 77. Future use of land in the United States—Circular 159. Forests of the United States, and their use—Circular 171. Many other circulars and bulletins of great value are published.

————— Statistics bureau. Agricultural graphics. Bulletin 78, 1910.

*————— Grain movement on the great lakes. Bulletin 81. (Free.)

————— Commerce department. Census bureau. Publications. (Free.)

Statistical atlas of the 12th census. Contains many diagrams and maps. Industrial districts, 1905. Transportation by water, 1906. Agriculture, 1902. Manufactures, 1902, 1905. Many publications treating special industries.

————— Inland waterways commission. Preliminary report. (Senate doc. 325. 60th Congress, 1st session.)

If secured through a member of congress, free.

————— Interior department. Geological survey. Papers on the conservation of water resources. (Free.)

See Water supply. Paper 234.

————— National conservation commission. Report. 3 v. (\$1.95.)

For sale by Superintendent of documents, Government printing office, Washington, D. C.

*Van Hise, C. R. The conservation of natural resources in the United States. New York, Macmillan. (\$2.)

Willis, J. C. Agriculture in the tropics. Cambridge press. (\$2.50.)

STATISTICAL.

Keltie, J. S. Statesman's yearbook. New York, Macmillan. (\$3.)

**United States. Agricultural department. Statistics bureau. Publications. (Free.)

See Statistical abstract of the United States (annual), Statistical abstract of foreign countries (annual), Commercial relations of the United States (annual), Commerce and navigation of the United States (annual), Monthly summary of commerce and finance.

**————— Interior department. Geological survey. Mineral resources in the United States. Annual publication. (Free.)

————— Interstate commerce commission. Statistics of railways of the United States. (Free.)

To facilitate the securing of new material either the library or the instructor should receive regularly the following Government publications. Material of great value is issued at frequent intervals by these departments, most of which can be secured free of charge. Selections may be made which will be especially applicable to the class work.

United States. Agricultural department. Monthly list of publications. (Free.)

————— Forest service. Press bulletins. (Free.)

————— Commerce department. Catalogues. (Free.)

————— Government printing office. Superintendent of documents. Monthly catalogue of public documents. (\$1.10 a year.)

————— Interior department. Geological survey. Monthly list of publications. (Free.)

The list of publications of the Pan American union, Washington, D. C., are of value. This is not a United States government publication.

CHEMISTRY.

HISTORICAL.

- Pearson, Karl. The grammar of science. London, Black. (\$1.90.)
 Thorpe, Sir T. E. A history of chemistry. 2 v. New York, Putnam. (75 cents each.)

GENERAL INORGANIC.

- Brownlee, R. B., *and others*. First principles of chemistry. Boston, Allyn & Bacon. (\$1.25.)
 Hessler, J. C., *and* Smith, A. L. Essentials of chemistry for secondary schools. Boston, Sanborn. (\$1.25.)
 McPherson, William, *and* Henderson, W. E. Elementary study of chemistry. Boston, Ginn. (\$1.25.)
 Newell, L. C. Descriptive chemistry. Boston, Heath. (\$1.40.)
 Ostwald, Wilhelm, *and* Morse, H. W. Elementary modern chemistry. Boston, Ginn. (\$1.)
 Philip, J. C. The romance of modern chemistry. Philadelphia, Lippincott. (\$1.50.)
 Roscoe, H. E., *and* Schorlemmer, Carl. A treatise on inorganic chemistry. 2 v. New York, Macmillan, 1908. (\$7.50.)
 Smith, Alexander. Introduction to general inorganic chemistry. New York, Century. (\$2.25.)

GENERAL ORGANIC.

- Perkins, W. H., *and* Kipping, F. S. Organic chemistry. Philadelphia, Lippincott. (\$2.)
 Remsen, Ira. Organic chemistry. Boston, Heath. (\$1.20.)

PHYSICAL CHEMISTRY.

- Carneige, Douglas. Law and theory in chemistry. New York, Longmans, Green & co. (\$1.50.)
 Clowes, Frank, *and* Coleman, I. B. Quantitative analysis. Philadelphia, Blakiston. (\$3.50.)
 Noyes, A. A. Qualitative chemical analysis. New York, Macmillan. (\$1.25.)
 Senter, G. Outlines of physical chemistry. New York, Van Nostrand. (\$1.75.)
 Stieglitz, J. O. Elements of qualitative chemical analysis. 2 v. New York, Century. (v. 1, \$1.40; v. 2, \$1.20.)

INDUSTRIAL AND APPLIED.

- Bailey, E. H. S. A textbook on sanitary and applied chemistry. New York, Macmillan. (\$1.40.)
 Cohn, Lassar. Chemistry in daily life. Philadelphia, Lippincott. (\$1.75.)
 Rogers, Allen, *and* Aubert, A. B. Industrial chemistry. New York, Van Nostrand.

GENERAL IN CHARACTER, BUT LIKELY TO AROUSE MUCH INTEREST.

- Bird, R. M. Modern science reader. New York, Macmillan. (\$1.10.)
 Baskerville, Charles. Municipal chemistry. McGraw. (\$5.)
 Sadtler, S. P. Handbook of industrial organic chemistry. Philadelphia, Lippincott, (\$5.)

This would be valuable for reference.

PHYSICS.

GENERAL REFERENCES.

- **Adams, J. H.** Harpers' electricity book for boys. New York, Harper. (\$1.75.)
Manufacture, use, cost of simple electrical appliances. Illustrated.
- **Benjamin, Park.** Age of electricity. New York, Scribner. (\$2.)
- Bonney, G. E.** Electrical experiments. New York, Macmillan. (75 cents.)
- *Boys, C. V.** Soap bubbles and the forces which mould them. S. P. C. K. (85 cents.)
Many of these experiments are easily reproduced. Interesting and instructive.
- **Burns, E. E.** The story of great inventions. New York, Harper. (\$1.25.)
- **Cajori, Florian J.** History of physics. New York, Macmillan. (\$1.60.)
A rather complete treatise giving the work of the great scientists under the usual subdivisions of physics. Useful as a general reference, especially for the teacher.
- *Carnegie, Andrew.** James Watt. Garden city, N. Y., Doubleday, Page & co. (\$1.40.)
- *Duncan, R. K.** The new knowledge. Popular account of the new physics and the new chemistry in their relation to the new theory of matter. New York, Barnes (\$2.)
- *Edser, Edwin.** Heat: for advanced students. New York, Macmillan. (\$1.)
- **Fahie, J. J.** Life and times of Galileo. New York, Pott. (\$5.)
- **Faraday, Michael.** Experimental researches in electricity. New York, Dutton (Everyman's library.) (35 cents.)
Contains Faraday's most important lectures. A pioneer book in electrical science. Prof. Tyndall's personal reminiscences of the author greatly enhances the value of the book.
- Fleming, J. A.** Principles of electric wave telegraphy. New York, Longmans Green & co. (\$7.50.)
A complete up-to-date treatise on methods employed in modern wireless telegraphy and telephony
- Waves and ripples. Milwaukee, Wis., Young. (\$2.)
- **Gibson, C. R.** Electricity of to-day—Its work and mysteries described in non technical language. Philadelphia, Lippincott. (\$1.50.)
- **———** The romance of modern electricity. Lippincott. (\$1.50.)
- Scientific ideas of to-day. A popular account of the nature of matter, electricity, light, heat, etc., in nontechnical language. Lippincott. (\$1.50.)
- *Glazebrook, R. T.** James Clerk Maxwell and modern physics. New York, Macmillan. (\$1.25.)
- Hasluck, P. N., ed.** The book of photography. Philadelphia, McKay. (\$3.)
- **Hopkins, A. A.** The scientific American cyclopedia of formulas. New York, Munn. (\$5.)
- *Hopkins, G. M.** Experimental science. 2 v. Munn. (\$5.)
Directions for performing a number of simple experiments and for constructing apparatus. Very good for boys and young men.
- *———** Home mechanics for amateurs. Munn. (\$1.50.)
- *Houston, E. J.** The wonder book of light. New York, Stokes. (\$1.50.)
Nature and properties of light, instruments for special uses, etc., color, X-rays and radioactivity, illumination, photography, rainbows, polarized light. Over one hundred helpful illustrations.
- *———** The wonder book of magnetism. Stokes. (\$1.50.)
- *Iles, George.** Flame, electricity, and the camera. Garden city, N. Y., Doubleday Page & co. (\$2.)
- *———** Inventors at work. With chapters on discovery. Doubleday, Page & co. (\$2.50.)
Describes the great achievements of Bessemer in the manufacture of steel; of Bell in transmitting speech along a beam of light; of Von Welsbach in perfecting the incandescent gas mantle; of Edison in applying electricity to his great inventions: and of many others whose inventions have added to the scientific progress of to-day.

- Jackson, D. C. *and* J. P. Elementary book on electricity and magnetism and their applications. New York, Macmillan. (\$1.40.)
Simple treatment requiring only an understanding of elementary physics.
- Jenks, Tudor. Electricity for young people. New York, Stokes. (\$1.50.)
An historical development of the subject.
- Jones, F. A. Thomas Alva Edison. Sixty years of an inventor's life. New York, Crowell. (\$2.)
A book for all interested in science and in life. It can not fail to stimulate and inspire any person who reads it.
- Kennelly, A. E. Wireless telegraphy and wireless telephony. New York, Moffatt, Yard & co. (\$1.)
- *Lodge, Sir O. J. Pioneers of science. New York, Macmillan. (\$2.50.)
Biographical and historical, with clear and simple statements and discussions of some of the fundamental conceptions of physics.
- *—— Signalling across space without wires. New York, Van Nostrand. (\$2.)
- *Mach, Ernst. Popular scientific lectures. Chicago, Open court publishing co. (\$1.50.)
- Mann, C. R. The teaching of physics. New York, Macmillan. (\$1.)
- *Maxwell, J. C. Theory of heat. New York, Longmans, Green & co. (\$1.50.)
A classic. No other book presents the deeper verities of this science to the general reader so successfully.
- *Mendenhall, T. C. A century of electricity. Boston, Houghton Mifflin co. (Riverside science series. v. 1.) (\$1.25.)
- Norrie, H. S. Electric gas lighting. New York, Spon & Chamberlain. (50 cents.)
- Perry, John. Spinning tops. (New York agent.) (65 cents.)
A lecture for a general audience in simple language.
- Poincaré, Lucien. The new physics and its evolution. New York, Appleton. (\$1.75.)
In addition to a survey of the present trend in physical theories, it contains an excellent chapter on wireless telegraphy.
- Raffety, C. W. An introduction to the science of radioactivity. New York, Longmans, Green & co. (\$1.25.)
Useful as an elementary reference book.
- Ramsey, Sir William. Essays, biographical and chemical. New York, Dutton. (\$2.50.)
- Gases of the atmosphere—the history of their discovery. New York, Macmillan. (\$2.)
- Rotch, A. L. Sounding the ocean of air. S. P. C. K. (85 cents.)
Use of balloons, kites, etc., for studying the upper atmosphere. Fascinating, simple, clear, briefly historical.
- *St. John, T. M. How two boys made their own electrical apparatus. St. John. (\$1.)
- *—— Things a boy should know about electricity. St. John. (\$1.)
- *Santos-Dumont, Alberto. My air ships. New York, Century. (\$1.40.)
Interesting narrative of author's experiences and triumphs as builder and navigator of air ships.
- Sloane, T. O'C. Electric toy making. New York, Henley. (\$1.)
- Smith, Alexander, *and* Hall, E. H. Teaching of chemistry and physics in the secondary school. New York, Longmans, Green & co. (\$1.50.)
Written from a pedagogical point of view. Indispensable as a reference book for the teacher.
- *Thurston, R. H. Heat as a form of energy. Boston, Houghton Mifflin co. (\$1.25.)
- *—— A history of the growth of the steam engine. New York, Appleton. (\$2.50.)
- Thompson, S. P. Elementary lessons in electricity and magnetism. New York, Macmillan. (\$1.40.)
- Thompson, S. P. Life of Faraday. Macmillan. (\$1.25.)

Tidy, C. M. Story of a tinder box. S. P. C. K. (70 cents.)

A history of methods of getting fire, experimental lectures.

*Tyndall, John. Heat as a mode of motion. New York, Appleton. (\$2.50.)

*——— Sound. Appleton. (\$2.)

An excellent elementary reference book, especially on the relation of sound to music.

**Watkins, Alfred. Photography, its principles and applications. New York, Van Nostrand. (\$2.)

Watson, William. Text-book of physics. New York, Longmans, Green & co. (\$3.50.)

The best big book of encyclopedic character.

*Whetham, W. C. D. Recent development of physical science. Philadelphia, Blakiston. (\$2.)

Williams, Archibald. How it works. Nelson. S. P. C. K. (\$1.25.)

*Woodhull, J. F. Manual of homemade apparatus with references to chemistry, physics and physiology. New York, Barnes. (65 cents.)

Worthington, A. M. Splash of a drop. (50 cents.)

An interesting treatment of a simple phenomenon, illustrated with instantaneous photographs.

**Wright, Lewis. Optical projection. New York, Longmans, Green & co. (\$2.25.)

TEXTBOOKS.

Carhart, H. S., and Chute, H. N. First principles of physics. Boston, Allyn & Bacon. (\$1.25.)

Coleman. Elements of physics. Boston, Heath. (\$1.25.)

Crew, Henry. Elements of physics. New York, Macmillan. (\$1.10.)

Gorton, F. R. A high-school course in physics. New York. Appleton. (\$1.25.)

Hoadley, A. Brief course in general physics. New York [etc.], American book co. (\$1.20.)

Hastings, C. S., and Beach, F. E. General physics. Boston, Ginn. (\$2.75.)

Hall, E. H. A textbook of physics. New York, Holt, 1911. (\$1.25.)

Linebarger, C. E. A textbook of physics. Boston, Heath. (\$1.25.)

Lodge, O. J. Elementary mechanics. New York, Van Nostrand. (\$1.50.)

Mann, C. R., and Twiss, G. R. Physics. Chicago, Scott, Foresman & co. (\$1.25.)

Merrill, G. A. An elementary textbook of theoretical mechanics. New York [etc.] American book co. (\$1.50.)

Millikan, R. A., and Gale, H. G. A first course in physics. Boston, Ginn. (\$1.25.)

LABORATORY REFERENCES.

Cheston, Dean, and Timmerman, C. E. Laboratory manual. New York [etc.], American book co. (50 cents.)

Chute, H. N. Physical laboratory manual. Boston, Heath. (80 cents.)

Crew, H., and Tatnall, R. R. Laboratory manual of physics. New York, Macmillan (90 cents.)

Gage, Alfred P. Physical laboratory manual. Boston, Ginn. (35 cents.)

Linebarger, C. E. Laboratory manual of physics for use in secondary schools. Boston, Heath. (80 cents.)

Lock, C. G. W. Workshop receipts. New York, Spon & Chamberlain.

Millikan, R. A., and Gale, H. G. A laboratory course in physics. Boston, Ginn. (40 cents.)

Smith, C. H., Tower, W. E., and Turton, C. M. Manual of experimental physics. Ginn. (80 cents.)

HOME ECONOMICS.

FOOD.

Dodd, M. E. Chemistry of the household. Chicago, American school of home economics. (\$1.)

Elliott, S. M. Household bacteriology. American school of home economics. (\$1.)

Norton, A. P. Food and dietetics. American school of home economics. (\$1.)

There is a textbook which is a combination of the above-mentioned books, bound in one volume. The price for the combination volume is \$1.25.

Olsen, J. C. Pure food. Boston, Ginn. (80 cents.)

GOVERNMENT BULLETINS.

United States. Department of agriculture. Farmer's bulletins.

May often be obtained free, by application to a congressman or to the Agricultural department. It is more satisfactory, however, to send to the Superintendent of documents, Washington, D. C., in which case the price is 5 cents.

The following Farmer's bulletins may be consulted to advantage: Care of food in the home, Bulletin 249; Principles of nutrition, Bulletin 142; Cereal breakfast foods, Bulletin 249; Bread and bread making, Bulletin 389; Rice culture in the United States, Bulletin 110; Food value of corn and corn products, Bulletin 289; Sugar as food, Bulletin 93; Meats, composition and cooking, Bulletin 34; Economical use of meat in the home, Bulletin 391; Poultry as food, Bulletin 182; Fish as food, Bulletin 85; Eggs as food, Bulletin 128; The use of milk as food, Bulletin 42; The care of milk and use in home, Bulletin 363; Butter making on the farm, Bulletin 413; Cheese making on the farm, Bulletin 241; Cheese and its economical uses in the diet, Bulletin 487; The use of fruit as food, Bulletin 293; Canned fruit, preserves and jellies, Bulletin 203; Preparation of vegetables for the table, Bulletin 256; Potatoes and other root crops, Bulletin 295; Beans, peas, and other legumes, Bulletin 121; Nuts, and their uses as food, Bulletin 332.

See also the function and uses of food, Circular 48 (5 cents); Relation of nutrition investigation to home, Reprint, 1907 (5 cents); Course in cereal foods, Experimental station bulletin 20 (10 cents); Course in the use and preparation of vegetable food, Experiment station bulletin 245; Government charts on composition of food.

REFERENCE BOOKS.

Barrows, Anna. Principles of cookery. Chicago, American school of home economics. (\$1.)

A cook book differing from the ordinary cook book in that it deals with the principles of preparation as well as with specific receipts.

Carpenter, F. G. How the world is fed. New York [etc.], American book co. (60 cents.)

A good book on the production and preparation of food. Shows the effect on commerce of the exchange of food between different nations.

*Conn, H. W. Bacteria, yeasts and molds in the home. Boston, Ginn. (\$1.)

Popular but scientific discussion on bacteria of yeasts and molds. Well adapted to high-school pupils.

Dodd, M. E. Chemistry of the household. Chicago, American school of home economics. (\$1.)

Gives the chemistry of some of the operations as they occur in the day's work.

Elliott, S. M. Household bacteriology. American school of home economics. (\$1.)

Interesting book on the care of the home.

*Farmer, F. M. Boston cooking-school cook book. Boston, Little, Brown & co. (\$2.)

The best general cook book on the market.

Green, M. E. Food products of the world. Boston, Whitcomb & Barrows. (\$1.20.)

Deals with description rather than composition.

Hill, J. McK. Practical cooking and serving. Garden city, N. Y., Doubleday, Page & co. (\$2.)

- Hill, J. McK. Salads, sandwiches, and chafing-dish dainties. Boston, Little, Brown & co. (\$1.50.)
- Hough, Theodore, *and* Sedgwick, W. T. The human mechanism. Boston, Ginn. (\$2.)
An authoritative, interesting, though elementary text, dealing especially with hygiene.
- *Hutchinson, Robert. Food and dietetics. New York, Wood. (\$3.)
To be used as a reference; not up to date.
- *McKay, G. L., *and* Larsen, C. Principles of butter making. New York, Wiley. (\$1.50.)
A good, general discussion of milk and milk fats, giving data not easily accessible elsewhere.
- Parloa, Maria. Home economics. New York, Century. (\$1.50.)
A very helpful book, dealing with the every-day problems of the home.
- *Wiley, Harvey W. Foods and their adulteration. Philadelphia, Blakiston. (\$4.)
Especially good on origin, manufacture, and composition of food products.
- Williams, M. E., *and* Fisher, K. R. Elements of theory and practice of cookery. New York, Macmillan. (\$1.)
Contains good suggestions as to the science principles underlying food preparation.
- Wilson, L. L. W. Handbook of domestic science. Macmillan. (\$1.)
A book a little out of date but containing good suggestions.

SHELTER (TEXTBOOKS).

- Bevier, Isabel. The house. Chicago, American school of home economics. (\$1.)
A brief account of the development, construction, and decoration of the house.
- Elliott, S. M. Household hygiene. American school of home economics. (\$1.)
Interesting and valuable book on the care of the house.
- Terrill, Bertha. Household management. American school of home economics (\$1.)
Practical discussion of housekeeping as a profession, operation expenses of each department, organization and division of labor, furnishings, food; clothing and higher life of the household.
N. B. The preceding three books are found in 1 volume for \$1.25.

REFERENCE BOOKS.

- Abbott, Edith. Women in industry. New York, Appleton. (\$2.)
Thorough, readable study of women as a factor in American economic history.
- *Addy, S. O. Evolution of the English house. London, Sonnenschein. (\$1.15.)
Excellent for the study of early English homes.
- Allen, J. J. Sanitation in the modern home. Dom. eng. co. (\$2.)
Readable text on sanitation.
- *Clark, T. M. The care of a house. New York, Macmillan. (\$1.50.)
Very helpful work on construction, equipment, and care of the house.
- Currier, C. G. Practical hygiene. New York, Treat. (\$2.)
Technical text on sanitation.
- *Daniels, F. H. The furnishing of a modest home. Chicago, Atkinson, Mentzer & co. (\$1.)
An excellent book giving practical suggestions.
- Earle, A. M. Colonial days in old New York. New York, Scribner. (\$1.25.)
——— Home life in colonial days. New York, Macmillan. (\$2.50.)
- Mason, O. T. Woman's share in primitive culture. New York, Appleton. (\$1.75.)
Good as a reference as to the origin of many industries.
- Richards, E. H. Art of right living. Boston, Whitcomb & Barrows. (50 cents.)
——— The cost of living. New York, Wiley. (\$1.)
Suggestive books showing the effect on the household of modern conditions.

Salmon, L. M. Domestic service. New York, Macmillan. (\$2.)

An excellent discussion of the servant girl problem. Gives practical suggestions as to ways of solving some of the difficulties.

Smith, H. E. Colonial days and ways. New York, Century. (\$2.50.)

Entertaining and instructive material on early life in America.

Stickley, Gustav, *ed.* Craftsman homes. 2 v. New York, Craftsman publishing co. (75 cents each.)

Practical articles from the Craftsman. Both artistic and practical.

Talbot, Marian, *and* Breckinridge, S. P. The modern household. Boston, Whitcomb & Barrows. (\$1.)

A discussion of housekeeping as a public function rather than as an individual undertaking.

Wheeler, Candace. Principles of home decoration. Garden city, N. Y., Doubleday Page & co. (\$1.80.)

More suggestive than practical.

HOUSEHOLD ART.

(Books on this subject are so scarce that starrng of the individual titles is unwise.)

COTTON.

A cotton fabric glossary. Boston, Bennett. (\$3.)

Brooks, Eugene C. The story of cotton. Chicago, Rand-McNally & co. (75 cents.)

This book treats of one of the greatest industries of the world and its relation to the life of the people. It acquaints the student with one of the leading economic forces and its relation to the politics of the country.

Edge, J. H. Practical cotton finishing. London, Trades paper publishing co. (90 cents.)

Wilkinson, F. The story of the cotton plant. New York, Appleton. (35 cents.)

An inexpensive text which gives a great deal of rather unorganized, but valuable information.

HISTORY.

Heyney, E. P. An introduction to the industrial and social history of England. New York, Macmillan. (\$1.40.)

Wright, C. D. An industrial evolution of the United States. New York, Scribner. (\$1.25.)

LACE.

Holdenberg, S. L. Lace, its origin and history. New York, Brentano. (\$1.25.)

This book is mainly a glossary of machine and hand made laces with a brief introductory chapter on the history of lace making. Its special value lies in the excellent illustrations of both kinds of lace.

NEEDLEWORK.

Day, L. F., *and* Buckle, Mary. Art in needlework. New York, Scribner.

A practical handbook in embroidery with excellent illustrations.

RUGS.

Holt, R. B. Rugs, oriental and occidental. Chicago, McClurg. (\$5.)

A valuable reference book with excellent illustrations.

Mumford, J. K. Oriental rugs. New York, Scribner. (\$7.50.)

Authoritative information on the history, materials, weaving, dyes, and dyers, with accurate descriptions and distinguishing details. Valuable illustrations.

SILK.

Rayner, Hollins. Silk throwing and waste spinning. Scott, Greenwood & son (\$2.50.)

A technical treatise on the preparation and treatment of silk in the production of spun and reeled threads.

WOOL.

Barker, A. F. Wool carding and combing. London, Cassell. (\$1.50.)

An excellent detailed account of the wool industry.

Bowman, F. H. The structure of the wool fiber. New York, Macmillan, 1908 (\$2.60.)

TEXTILES.

Barker, A. F. Textiles. New York, Van Nostrand. (\$2.)

A valuable work which gives extensive but accurate information on the whole range of the textile industries.

Beaumont, Robert. The finishing of textile fabrics. Van Nostrand. (\$4.)

Cole, G. S. Encyclopedia of dry goods. Rev. ed., 1900. (Out of print.)

An excellent reference book for descriptive and historical accounts of standard fabrics, garments and related articles of merchandise.

Cyclopedia of textile work. 1, 2, and 7. Chicago, American school of correspondence (\$3 each.)

Very technical. The best reference books on the processes in the manufacture of cotton and woollen cloth.

Cooley, W. H. Textiles. (\$1.)

Practical but untechnical, with a limited description of the processes of manufacturing wool, silk, cotton, and linen goods.

Georgeovics, Georg von. Chemical technology of textile fabrics. Scott, Greenwood & son. (\$3.)

Especially valuable because of the discussion of the processes in the finishing of fabrics made from the principal fibres of commerce.

Glossary of weaves, etc. Scranton, Pa., International textbook co.

The most authentic and readable discussion of structure. Very technical. It is one of a set of books on textiles and can not usually be bought separately. But its value in the study of structure is greater than any book written on the subject.

Matthews, J. M. The textile fibres, their physical microscopical and chemical properties. New York, Wiley. (\$4.)

A thorough discussion of the chemical analysis of textile fibres. To be used as a reference book.

ART.**REPRESENTATION.**

Clark, E. E. Plant form. London, Lane. (\$2.50.)

**Cross, A. K. Free-hand drawing. Boston, Ginn. (80 cents.)

**——— Light and shade. Ginn. (\$1.)

——— Mechanical drawing. Ginn. (\$1.)

Dunlop, J. M. Anatomical diagrams. Bell & sons. (\$2.)

East, Alfred. The art of landscape painting in oil color. Philadelphia, Lippincott (\$3.)

Foord, J. Decorative plant and flower studies. O. P. Botsford. (30s.)

Haney, J. P. Pencil sketching from nature (paper). Chicago, Atkinson, Mentzer & co. (50 cents.)

Hatton, R. G. Figure composition. New York, Scribner. (\$2.75.)

*——— Figure drawing. Scribner. (\$2.75.)

*Maginis, C. D. Pen drawing. Boston, Bates & Guild. (\$1.)

- *Mathewson, F. E. Perspective sketching from working drawings. Taylor. (\$1.)
 Miller, L. W. Essentials of perspective. New York, Scribner. (\$1.50)
 **Norton, D. M. Free-hand perspective. Pratt. Inst., The Author. (\$3.)
 Pennell, Joseph. Modern illustration. New York, Macmillan. (\$2.)
 Townsend, W. G. Plant and floral studies. London, Lane. (\$2.)
 Turner, J. M. W. Liber studiorum. New York, Scribner. (\$4.)
 *Vanderpoel, J. W. Human form. New York, Inland press. (\$2.)
 **Verneuil, M. P. Encyclopédie artistique et documentaire de la plante. 4 v. Paris, Librairie centrale des beaux-arts. (\$54.)
 An unusually fine work on plants and flowers for all artistic uses. Copiously and superbly illustrated in colors.

DESIGN—CONSTRUCTIVE.

- Baer, ——. Das Farbige Raumkunst. Stuttgart, Hoffman. (\$6 net.)
 'Binns, C. F. Potter's craft. New York, Van Nostrand. (\$2.)
 'Clifford, C. R. Period furnishings. Clifford & Lawton. (\$4.50.)
 'Cockerell, Douglas. Bookbinding and the care of books. New York, Appleton. (\$1.25.)
 'Daniels, F. H. The furnishing of a modest home. Chicago, Atkinson, Mentzer & co. (\$1.)
 Day, L. F., and Buckle, Mary. Art in needlework. New York, Scribner. (\$2.)
 Ellwood, G. M. English furniture and decoration, 1680-1800. Stuttgart, Hoffman. (\$5.40.)
 Esquie, Pierre, ed. Traite elementaire d'architecture. Schmid. (Van Dort, agt.) (\$2.)
 Helme, Charles, ed. Peasant art in Sweden, Lapland, and Iceland. (Studio special no.) London, Lane. (Paper, \$2.25; cloth, \$3.)
 ——— Peasant art in Austria-Hungary. (Studio special no.) Lane. (Paper, \$2.25; cloth, \$3.)
 Jack, George. Wood carving. New York, Appleton. (\$1.40.)
 Meyer, F. S. Handbook of ornament. New York, Hessling. (\$3.60.)
 Nye, Alvin. Furniture designing. New York, Comstock. (\$2.)
 Rathbone, R. L. B. Simple jewelry. New York, Van Nostrand. (\$2.)
 Robie, Virginia. Historic styles in furniture. House beautiful. (\$1.60.)
 Robinson, J. B. Architectural composition. New York, Van Nostrand. (\$2.50.)
 Rose, A. F. Copper work. Chicago, Atkinson, Mentzer & co. (\$1.50.)
 "The studio" yearbook. (All years.) London, Lane. (\$2.70.)
 Vitthaus, ——. Decorative art in South Kensington museum. New York, Helburn. (\$4.)

DESIGN—DECORATIVE.

- *Batchelder, E. A. Design in theory and practice. New York, Macmillan. (\$1.75.)
 ——— Principles of design. Chicago, Inland printer. (\$3.)
 Crane, Walter. Bases of design. New York, Macmillan. (\$2.25.)
 ——— Decorative illustration of books. Macmillan. (\$2.)
 ——— Line and form. Macmillan. (\$2.25.)
 Day, L. F. Anatomy of pattern. New York, Scribner. (\$1.25.)
 ——— Nature the raw material of ornament. Scribner. (\$2.)
 ——— Ornament and its application. Scribner. (\$3.25.)
 ——— Ornament, the finished product of nature. Scribner. (\$3.)
 ——— Pattern design. Scribner. (\$3.)
 ——— Windows, a book about stained glass. Scribner. (\$7.50.)
 *Dekorative Vorbilder. Stuttgart, Hoffman. (\$3.50 per v.)
 Bound magazine.

**Deutsche Kunst & Dekoration*. Darmstadt, V. A. Koch. (\$3.90 per v.)
Bound magazine.

Dow, Arthur W. *Composition*. Garden city, N. Y., Doubleday, Page & co. (\$2.50.)

*Frilling, H. *Moderne Flach ornaments*. Hessling, New York, agt. (\$20.)

Jackson, F. H. *A. B. C. of drawing and design*. London, Chapman & Hall. (5s.)

——— *Lessons in decorative design*. New York, Scribner. (\$2.)

Jones, Owen. *Grammar of ornament*. Scribner. (\$18.)

Lilley, A. E. V., and Midgley, W. *A book of studies in plant form*. Scribner. (\$2.)

Mayeux, Henri. *Manual decorative composition*, 1888. New York, Appleton. (\$1.50.)

Mucha, A. M. *Documents decoratifs*. Paris, Librairie centrale des beaux arts. (\$27.)

Ross, D. W. *Theory of pure design*. Boston, Houghton Mifflin co. (\$2.50.)

*Raciné, Auguste. *L'ornement polychrome*. 2nd series. Paris, *Firmin-Didot*.
(\$40.)

Speltz, Alexander. *Styles of ornament*. Berlin. Hessling, New York, agt. (\$4.)

*Verneuil, M. P. *Etude de la plante*. Paris, Librairie centrale des beaux arts. (\$15.)

——— and Grasset, E. *Documents ornementaux*. 450 bordures. Librairie centrale
des beaux arts. (\$8.)

LETTERING.

**Brown, F. C. *Letters and lettering*. Boston, Bates & Guild. (\$2.)

Day, L. F. *Alphabets, old and new*. New York, Scribner. (\$2.)

*French, T. E. *Essentials of lettering*. Columbus, Ohio, Varsity supply co. (\$1.)

Johnston, Edward. *Manuscript and inscription letters*. London, Hogg. (3s. 6d.)

**——— *Writing and illuminating, and lettering*. New York, Macmillan. (\$2.)

Stevens, T. W. *Lettering for printers and designers*. Chicago, Inland printer. (\$1.)

HISTORY.

*Fletcher, Banister, and B. F. *History of architecture*. New York, Scribner. (\$7.50.)

*Glazier, R. *Manual of historic ornament*. Scribner. (\$2.)

Hamlin, A. D. F. *History of architecture*. New York, Longmans, Green & co. (\$2.)

Hoyt, D. L. *The world's painters*. Boston, Ginn. (\$1.25.)

Marquand, Allan, and Frothingham, A. L. *History of sculpture*. New York, Long-
mans, Green & co. (\$1.50.)

Petrie, W. M. F. *Egyptian decorative art*. New York, Putnam. (3s. 6d.)

Reinach, Salomon. *Apollo*. An illustrated manual of the art throughout the ages.
New York, Scribner. (\$1.50.)

Tarbell, F. B. *History of Greek art*. New York, Macmillan. (\$1.)

Van Dyke, J. C. *History of painting*. New York, Longmans, Green & co. (\$1.50.)

Ward, J. *Historic ornament*. New York, Scribner. (\$3.)

Ware, W. R. *American vignola*. Scranton, Pa., International textbook co. (\$2.)

GENERAL.

Adeline, Jules. *Art dictionary*. New York, Appleton. (\$2.25.)

Balfour, Henry. *Evolution of decorative art*. London, Rivington. (4s. 6d.)

Caffin, C. H. *Guide to pictures*. Garden city, N. Y., Doubleday, Page & co. (\$1.25.)

——— *How to study pictures*. New York, Century. (\$2.)

*Davenport, Cyril, *ed.* *Little books on art*. Chicago, McClurg. (\$1 each.)
Jewelry, miniatures, bookplates, etc.

Dow, W. *Theory and practice of teaching art*. New York, Columbia university,
Teachers college. (\$1.)

Elgood, G. S. *Gardens of England in the northern counties*. London, Lane.
(Cloth, \$2.70; paper, \$2.25.)

——— and Jekll. *Some English gardens*. New York, Longmans, Green & co. (\$12.)

Hamerton, P. G. *Graphic arts*. Boston, Little, Brown & co. (\$1.50.)

- Hogarth, William. Analysis of beauty. J. Reeves & Turner. (\$1.)
 Van Dyke, J. C. Art for art's sake. New York, Scribner. (\$1.50.)
 *Viollet-le-Duc, E. E. Learning to draw. New York, Putnam. (\$2.)
 Walker, William. Handbook of drawing. New York, Scribner. (\$1.75.)

COLOR.

- Munsell, A. H. A color notation. Ellis. (\$1.25.)
 Ross, D. W. Theory of pure design. Boston, Houghton Mifflin co. (\$2.50.)
 Chapters on color.

DRAWING BOOKS AND COURSES.

- Hammock, ———. Manual arts. Nos. 1-8. Boston, Heath. (\$1.50 per doz.)
 Prang's drawing books. Nos. 4-8. New York, Prang educational co. (\$2.25 per doz.)
 Seegmiller, ———. Applied arts drawing books. Chicago, Atkinson, Mentzer & co. (\$1.60.)

PERIODICALS.

- Architectural record. (\$2.50.)
 L'art decoratif. Administration and redaction. Paris. (\$4.)
 The Craftsman. New York, Craftsman pub. co. (\$3.)
 Dekorative kunst. F. Bruckmann. (\$7.50.)
 Deutsche kunst and dekoration. Darmstadt, Koch. (\$5.76.)
 International studio. London, Lane. (\$5.)
 Printing art. University press. (\$3.50.)
 School arts. Boston, School arts publishing. co. (\$2.)

MUSIC.

HARMONY AND FORM.

- Alchin, C. A. Ear training for teacher and pupil. Boston, Ditson. (\$1.)
 A book of simple definite methods easily understood and practiced by any one.
 *Goetschius, Percy. Lessons in music form. Ditson. (\$1.25.)
 *Goodrich, A. J. Complete musical analysis. Church. (\$2.)
 A carefully developed system for cultivating the art of listening. It outlines systematic practice in listening to single tones, different kinds of rhythm, chord combinations, etc., until the pupil is prepared for a close analysis by ear of the masterpieces.
 Hanchett, H. G. The art of the musician. New York, Macmillan. (\$1.)
 Henderson, N. J. What is good music? New York, Stokes. (\$1.)
 Kobbé, Gustav. How to appreciate music. New York, Scribner. (\$1.)
 *Krehbiel, H. E. How to listen to music. Scribner. (\$1.25.)
 This book is written not for the technical musician, not for the careless listener—but for the music lover who wishes to develop the capacity properly to listen to music.
 Matthews, W. S. B. Primer of music forms. Schmidt. (75 cents.)
 A safe easy guide for an untutored student.
 *Surette, T. W., and Mason, G. G. The appreciation of music. Garden city, N. Y., Doubleday, Page & co. (\$1.50.)
 Aims to provide a simple and practical guide to musical appreciation, written from the listener's rather than from the musician's standpoint.
 White, W. A. Harmony and ear training. New York, Silver, Burdette & co. (\$1.50.)

A modern unique harmony especially adapted to high-school use, as it presupposes no large musical experience. A plain presentation of the actual facts and effects in music, based upon the universal use of musical material by composers.

ORCHESTRA.

- *Goepp, P. H. Symphonies and their meaning. 2 v. Philadelphia, Lippincott. (\$2 each.)

An analysis of standard symphonies from the standpoint of absolute music with the thought that an intelligent perception of the intent of a master will increase the enjoyment of the listener.

- *Kilburn, Nicholas. Story of chamber music. New York, Scribner. (\$1.25.)

Discusses its chief masters. Only work of its kind.

- Prout, Ebenezer. Instrumentation. Boston, Ditson. (75 cents.)

Describes the mechanism and principles of all instruments and the scales in which they play.

- Thomas, Theodore. A musical autobiography. Ed. by G. B. Upton. 2 v. Chicago, McClurg. (\$2.50 each.)

V. 1. Life work. V. 2. Concert programs.

HISTORY AND BIOGRAPHY.

- Baltzell, W. J. A complete history of music. Philadelphia, Presser. (\$1.75.)

A book for schools and clubs combining the lecture and recitation system.

- Dickinson, Edward. Study of the history of music. New York, Scribner. (\$2.50.)

Brief, interesting history with a useful system of references.

- *Elson, Arthur. Modern composers of Europe. Boston, Page. (\$1.50.)

- Elson, L. C. National music of America and its sources. Page. (\$1.50.)

Popular account of the music of the Pilgrims and Puritans, the beginnings of secular music in New England, rise of choral music, and the present condition of music.

- **Grove, Sir George. Dictionary of music and musicians. 5 v. New ed. New York, Macmillan. (\$5 each.)

An encyclopedia of music, musicians, musical instruments, and musical terms.

- *Hamilton, C. G. Outlines of music history. Boston, Ditson. (\$1.50.)

A concise scientific history designed for use both by the general reader and for class work. A system of paragraphing by topics. Valuable summaries and reference lists.

- Henderson, W. J. How music developed. New York, Stokes. (\$1.25.)

A vast amount of information given in a lucid and direct style.

- Hughes, Rupert. Contemporary American composers. Boston, Page. (\$1.50.)

Not to be treated as very serious criticism, but full of information which might be hard to get elsewhere.

- Lavignac, Albert. Music and musicians. Ed. by Krehbiel. New York, Holt. (\$1.75.)

CONTENTS.—A study of musical sound. The materials of sound. Grammar of music. Esthetics. History of the art of music.

- *Mason, D. G. From Grieg to Brahms. New York, Macmillan. (\$1.25.)

CONTENTS.—Introduction—the appreciation of music; Grieg; Dvorak; Saint Saens; Franck; Tschaikowski; Brahms; Epilogue; the meaning of music.

- *Nohl, Ludwig. Life of Bach. Chicago, McClurg. (75 cents.)

——— Life of Beethoven. McClurg. (75 cents.)

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——— Life of Schumann. McClurg. (75 cents.)

Nohl, Ludwig. Life of Wagner. McClurg. (75 cents.)

The above works by Nohl are translated by Upton and Lalor.

Pratt, W. S. History of music. New York, Schirmer. (\$3.)

A book of reference for students, bringing together facts and conclusions from a great variety of sources.

SONG.

*Elson, L. C. History of German song: An account of the progress of vocal composition in Germany from the time of the Minnesingers to the present age. Rev. ed. Boston, New England conservatory of music. (\$1.25.)

Finck, H. T. Songs and song writers. New York, Scribner. (\$1.25.)

CONTENTS.—Folk song and art song. German song-writers before Schubert. Schubert. German song writers after Schubert. Hungarian and Slavic song writers. Scandinavian song writers. Italian and French song writers. English and American song writers.

Russell, L. A. English diction for speakers and singers. Boston, Ditson. (\$1.)

OPERA.

Elson, Arthur. Critical history of opera. Boston, Page. (\$1.50.)

Interesting to all students of music.

*Lavignac, Albert. Music dramas of Richard Wagner. Tr. by Singleton. New York, Dodd, Mead & co. (\$2.50.)

Interesting, detailed story of operas. Is especially strong in its analysis of plots and motifs.

*Singleton, Esther. Guide to modern opera. (\$1.50.)

Describes music and plots of 26 present-day operas. Of interest to the average opera goer.

*Upton, G. P. Standard light opera. Chicago, McClurg. (\$1.20.)

—— Standard operas. McClurg. (\$1.75.)

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SHOP WORK.

IRON WORKING.

**Atkins, E. A. Practical sheet and plate metal work. Peoria, Ill., Manual arts press. (\$2.)

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Bacon, J. F. Forge practice. New York, Wiley. (\$1.50.)

Valuable as a reference.

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Thorough and complete text.

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Splendid reference for beginners.

—— and Stanley, F. A. The Hill kink books. McGraw-Hill book co. (50 cents each.)

Hobart, J. F. Brazing and soldering. Hanley. (25 cents each.)

**Ilgen, W. F. Forge work. New York, [etc.], American book co. (80 cents each.)

A book arranged especially for class-room work.

Neubecker, William. Sheet metal work. Neubecker. (\$3.)

Good reference.

**Palmer, R. H. Foundry practice. Peoria, Ill., Manual arts press. (\$2.)

Practical. Good high-school reference; also valuable as a textbook.

**Richards, W. A. Elementary foundry practice. New York, Macmillan. (\$1.25.)

A textbook for high-school students.

**Richardson, M. T. Practical blacksmithing. 4 v. Richardson co. (\$1 each.)

Good reference.

****Smith, R. H.** Textbook of the elements of machine work. Boston, Industrial education book co. (\$2.)

Well adapted for use as a text for beginners. Illustrations are clear and numerous.

****——** Textbook of the principles of machine work. Industrial education book co. (\$3.)

A practical textbook dealing with machine tools.

WOODWORKING.

****Allen, E. G.** Manual training for common schools. New York, Scribner. (\$1.)

A well written textbook. Practical.

***Crowshaw, F. D.** Problems in wood turning. Peoria, Ill., Manual arts press. (80 cents.)

A course in wood turning. Suitable for text or reference.

***Goss, W. F. M.** Bench work in wood. Rev. ed. Boston, Ginn. (70 cents.)

A good reference.

****Griffith, I. S.** Essentials of woodworking. Boston, Manual arts press. (\$1.25.)

A textbook on woodworking tools, materials, and processes.

***Horner, J. G.** Principles of pattern making. 3d ed. New York, Van Nostrand. (\$3.)

Good reference.

King, C. A. Elements of construction. New York [etc.], American book co. (70 cents.)

A textbook and reference. Practical.

—— Elements of woodworking. American book co. (60 cents.)

An elementary text treating materials and beginning processes in woodworking.

****Noyes, William.** Handwork in wood. Peoria, Ill., Manual arts press. (\$2.)

A splendid reference.

****——** Wood and forest. Manual arts press. (\$3.)

A reference book of value to all students of woodworking.

Practical upholsterer. Industrial publishing co. (\$1.)

General reference book.

****Purfield, H. T.** Wood pattern making. Rev. ed. Peoria, Ill., Manual arts press. (\$1.25.)

A practical textbook and shop manual.

Ross, Alexander. Wood turning. Boston, Ginn. (\$1.)

A brief course in applied turning.

Townsend, Gilbert. Carpentry. Chicago, American school of correspondence. (\$1.)

A brief course in the selection of lumber and framing of buildings.

****Wells, P. A., and Hooper, John.** Modern cabinetwork, furniture, and fitments.

London, Lane. (Manual arts press, agent.) (\$5.)

A superior reference. The best available book on cabinetmaking.

GENERAL.

Adams, J. H. Harper's electricity for boys. New York, Harper. (\$1.75.)

****Allen, N. B.** Industrial studies United States. Boston, Ginn. (65 cents.)

Boulger, G. S. Wood. Philadelphia, Arnold. (\$2.60.)

A valuable book for all interested in wood from the artisan's standpoint.

Haywood, C. B. Building and flying an aeroplane. Chicago, American school of correspondence. (\$1.)

Elementary.

Marks, T. S., and Wyer, S. S. Gas engines and producers. American school of correspondence. (\$1.)

Valuable reference.

Merriman, Mansfield. Strength of materials. New York, Wiley. (\$1.)

Elementary. A splendid reference for beginners.

Mowry, W. A. American inventions and inventors. Boston, Silver, Burdette & co. (\$1.)

**Price, O. W. The land we live in. Boston, Small, Maynard & co. (\$1.50.)

St. John, T. H. Study of elementary electricity and magnetism. St. John. (\$1.25.)

Watt, Alexander. Leather manufacture. 5th ed. New York, Van Nostrand. (\$4.)
General reference.

MAGAZINES.

Electrician & mechanic. Sampson publishing co., New York city. (\$1.)

Modern electrics. Modern publishing co., New York city. (\$1.)

Popular electricity. Popular electricity publishing co., Chicago. (\$1.)

Popular mechanics. Popular mechanics publishing co., Chicago. (\$1.50.)

Technical world. The technical world co., Chicago. (\$1.50.)

PHYSICAL EDUCATION.

HYGIENE.

Bennett, Arnold. The human machine. New York, Doran. (75 cents.)

Gulick, L. H. The efficient life. Garden city, N. Y., Doubleday, Page & co. (\$1.20.)

——— Healthful art of dancing. Doubleday, Page & co. (\$1.40.)

——— Mind and work. Doubleday, Page & co. (\$1.20.)

——— Physical education by muscular exercise. Philadelphia, Blakiston. (75 cents.)

Hall, G. Stanley. Youth, its education, regimen and hygiene. New York, Appleton. (\$1.50.)

Hall, W. S. From youth into manhood. New York, Y. M. C. A. press. (50 cents.)

Hough, Theodore, and Sedgwick, W. T. The human mechanism. Boston, Ginn. (\$2.)

Hutchinson, Woods. Handbook of health series. Book 2. Boston, Houghton Mifflin co. (65 cents.)

LaGrange, Fernand. Physiology of bodily exercise. Springfield, Mass., Strekett. (\$1.75.)

McCurdy, J. H. Bibliography of physical training. Teachers' reference book. Strekett. (\$3.)

Pyle, W. L. Manual of personal hygiene. Philadelphia, Saunders. (\$1.50.)

Ritchie, J. W. Human physiology. Yonkers-on-Hudson, N. Y., World book co. (80 cents.)

——— Primer of sanitation. World book co. (80 cents.)

Robb, I. H. Nursing. Cleveland, Kolskert. (\$2.)

Sargent, D. A. Health, strength, and power. Boston, Caldwell. (\$1.75.)

Williams, R. F. Food and diet. Philadelphia, Lea & Febiger. (\$2.)

GAMES AND ATHLETICS.

Bancroft, J. H. Games for the playground, home, school, and gymnasium. New York, Macmillan. (\$1.50.)

Butterworth, Horace. How to tumble—a book of tumbling, tricks, etc. Chicago, Butterworth. (\$1.)

Dudley, Gertrude, and Kellor, F. A. Athletic games in the education of women. New York, Holt. (\$1.25.)

Evers, J. J., and Fullerton, H. S. Touching second. Chicago, Reiley & Britton. (\$1.25.)

- Faries, Randolph. Practical track and field athletics. New York, Duffield. (\$1.)
- Graham, John, *and* Clark, Ellery H. Practical track and field athletics. Duffield. (\$1.)
- Harper's Round table monthly. Track athletics in detail. New York, Harper. (\$1.)
- Leonard, H. F. Handbook of wrestling. Pelton. (\$2.)
- Spalding. Spalding athletic library. New York, American sports pub. co., 21 Warren street. (10 cents.)
- Group I, Baseball, nos. 1, 202, 223, 232, 230, 229, 225, 226, 228, 234, 731. Group III, Cricket, nos. 3, 277. Group IV, Lawn tennis, nos. 4, 157, 279. Group V, Golf, nos. 5, 276. Group VI, Hockey, no. 154. Group VII, Basketball, no. 193. Group IX, Indoor baseball, no. 9. Group XIII, Athletic accomplishments, nos. 177, 296, 23.
- Stagg, A. A., *and* Williams, H. L. Treatise on American football. New York, Appleton. (\$1.25.)

ACCIDENTS AND EMERGENCIES.

- Dulles, C. W. Accidents and emergencies. Philadelphia, Blakiston. (\$1.)

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REPORT ON THE WORK OF THE
BUREAU OF EDUCATION FOR THE
NATIVES OF ALASKA, 1911-12





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REPORT ON THE WORK OF THE BUREAU OF EDUCATION FOR THE NATIVES OF ALASKA, 1911-12.

PART I.—GENERAL SUMMARY.

REPORT ON EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, February 1, 1913.

SIR: I have the honor to submit the annual report of the Alaska division of the Bureau of Education for the fiscal year ended June 30, 1912.

During this period the field force of the Alaska school service consisted of 4 district superintendents of schools, 1 assistant superintendent, 108 teachers, 8 physicians (1 of whom also filled another position), 8 nurses, 2 contract physicians, and 3 hospital attendants. Eighty public schools were maintained, with an enrollment of 4,018 pupils, and an average attendance of 1,805.

METHOD OF ADMINISTRATION.

The regulations governing the Alaska school service permit the greatest freedom of action on the part of the local employees that is consistent with the ultimate responsibility of the Commissioner of Education. Each of the four school districts is under the immediate charge of a district superintendent who has almost absolute control of the work of the Bureau of Education in his district, and he in turn delegates to the teachers the greatest possible freedom of action in the local affairs of the schools. At the beginning of each fiscal year the Commissioner of Education distributes to the purchasing agent in Seattle and to the district superintendents, from the appropriation made by Congress for education in Alaska, definite sums for the purchase of supplies, furniture, equipment, and fuel, for the payment of rental, for furnishing medical relief to the natives, for the relief of destitute natives, and for the payment of traveling expenses. In like manner, from the authorizations received by them from the Commissioner of Education, the district superintendents distribute to the teachers, physicians, and nurses in their districts "subauthoriza-

tions" to enable them to make expenditures for local needs. Except in grave emergency, no expenditure is permissible unless it is covered by an authorization or by a subauthorization. By this method of distributing funds each superintendent and teacher is enabled to meet, within the limit of expenditure authorized, every need of the service as it arises.

MEDICAL WORK.

Without neglecting the work in the schoolrooms and the sanitary work in the villages, special attention has been given during the year to medical work among the natives. Realizing the absolute necessity for checking disease among the natives of Alaska, \$25,144.50 of the appropriation for education in Alaska was used (1) in maintaining hospitals in rented buildings at Juneau and Nushagak; (2) in payments under contracts with the Holy Cross Hospital at Nome and the Fairhaven Hospital at Candle for the treatment of diseased natives, upon the application of a superintendent, physician, or teacher in the Alaska school service; (3) in the employment of 7 physicians in hospital work and in checking disease among the natives in their respective districts; (4) in the employment of 8 nurses in the hospitals and in hygienic and sanitary work in the native schools and villages; and (5) in furnishing medical chests to the teachers to enable them to treat minor ailments.

During the autumn of 1911 quarantine maintained at the mouth of the Porcupine River by Mr. George E. Boulter, superintendent of schools in the upper Yukon district, and by Dr. Grafton Burke, medical missionary of the Protestant Episcopal Church at Fort Yukon, who was temporarily employed by the Bureau of Education, was an important factor in preventing smallpox from entering the Yukon Valley by way of the Porcupine.

COOPERATION BY PUBLIC HEALTH SERVICE.

During the summer of 1911 Passed Asst. Surg. Milton H. Foster, of the Public Health Service, made a preliminary investigation of health conditions among the natives of southern Alaska with a view to inaugurating adequate measures for their relief. One of Dr. Foster's recommendations was the extension of the medical work in connection with the Alaska school service. In pursuance of this recommendation and in order that the entire medical work among the natives of Alaska might have expert supervision, upon the request of the Secretary of the Interior, the Surgeon General of the Public Health Service, in March, 1912, detailed Passed Asst. Surg. Emil Krulish for service in Alaska for an indefinite period under the direction of the Commissioner of Education. With the consent of the Secretary of the Treasury, the duties of Dr. Krulish for the Bureau of Education will be (a) to supervise all measures for the

medical and surgical relief of the natives of Alaska, (b) to act as instructor to the teachers of the United States public schools in Alaska in all matters pertaining to the sanitary education of the natives, (c) to give instructions to teachers in first aid to the injured or sick, and (d) to act in a general advisory capacity to the superintendent of education of natives of Alaska in all matters pertaining to sanitation, hygiene, maintenance of hospitals, and other matters of like character. The plans for the work of Dr. Krulish in Alaska include prescribing and enforcing regulations for checking disease in the native villages.

THE HYDABURG VILLAGE.

For several years there existed a desire among the members of the Hydah Tribe living in the villages of Klinquan and Howkan, in southeastern Alaska, to migrate to a site advantageously situated with regard to fishing and hunting grounds and running water, where they could found an exclusively native village and build up industries owned and operated by the natives themselves. During September, 1911, these natives moved to the selected site, on the west shore of Prince of Wales Island, where they founded a village, which they named Hydaburg. A United States public school was at once established for their benefit. By Executive order a tract of approximately 12 square miles was reserved for the use of this colony and such of the natives of Alaska as may settle within the limits of the reservation. Under the supervision of the teacher of the United States public school, the Hydaburg Trading Co. was organized to transact the mercantile business of the settlement and the Hydaburg Lumber Co. was organized to operate a sawmill. The natives were aided by the Bureau of Education in equipping the mill. A careful examination of the affairs of the two companies in December, 1912, by the supply agent of the Alaska division, detailed from Seattle for the purpose, showed that these native enterprises had been eminently successful. It was found possible for the directors of the Hydaburg Trading Co. to declare a cash dividend of 50 per cent and still have funds available toward the erection and equipment of a larger store building. The sawmill had provided the lumber used in building the homes for the natives, and had also furnished acceptable lumber to a number of the neighboring canneries.

THE ERUPTION OF KATMAI VOLCANO.

On June 6, 1912, Mount Katmai, a supposedly extinct volcano in southwestern Alaska, burst into eruption. For two days and nights a rain of ashes fell; the darkness was illumined by occasional flashes of lightning; the air was charged with suffocating gases; frequent earthquake shocks were felt. An extensive region was buried deep in volcanic matter. The eruption caused no loss of life, but destroyed

the houses of the natives living on the coast adjacent to the volcano and rendered necessary the distribution of food to the people in the stricken district, for the gardens were deeply covered and the salmon streams were choked with ashes. All employees of the Government in the region affected by the eruption cooperated with the Revenue-Cutter Service in rendering relief. Capt. K. W. Perry, commanding the revenue cutter *Manning*, conveyed 98 natives, whose homes had been destroyed, to a site on the Alaska Peninsula which had been selected for their new home. Here the two teachers from the United States public schools at Seldovia and Tatitlek supervised the erection of the new village, to which the name of Perry was given. The materials for the construction of 21 houses, to shelter these destitute natives, and the most necessary articles for their use were sent to them from Seattle.

JUNEAU CONFERENCE.

A conference of the teachers of the schools in southeastern Alaska and native delegates representing 9 of the largest villages was held in Juneau from October 28 to November 2, under the direction of the district superintendent. The morning sessions were for teachers only, and consideration was given to the various phases of the teachers' work. The afternoon sessions were devoted to discussions of the social and economic problems confronting the natives. The native delegates expressed themselves clearly and forcibly in regard to those problems. Resolutions urging extension of the medical work among the natives, assistance to the natives in the establishment of industrial enterprises, and legislation granting citizenship to duly qualified natives were adopted by the conference.

RECOMMENDATIONS.

I can not urge too strongly the importance of the appropriation by Congress of funds to enable the Bureau of Education to make adequate provision for the medical and sanitary relief of the natives of Alaska. The use for this purpose of part of the appropriation for the education of the natives is an emergency measure dictated by the absolute necessity for action. The entire appropriation is urgently needed for the support of the schools and to promote the industrial development of the native population. Under a decision of the comptroller this appropriation can not be used in erecting hospitals.

I repeat my recommendation for the passage of a compulsory school attendance law, which is especially needed in native villages adjacent to the large towns. It is greatly to be desired that the compulsory school attendance bill which was passed by the Senate at the last session, but not acted upon by the House, should become a law.

I again invite attention to the fact that the Bureau of Education should own and maintain a seagoing vessel in which to transport

teachers, building materials, and school supplies from Seattle to the schools on the shores of Bering Sea and the Arctic Ocean. Such a vessel would in a few years save freight charges equivalent to its original cost; it would enable the district superintendents and physicians to inspect thoroughly the remote Arctic villages, and furnish means of instructing in seamanship the natives along that coast.

LIST OF PERSONS IN THE ALASKA SCHOOL SERVICE (EXCLUSIVE OF TEACHERS), 1911-12.

William T. Lopp, superintendent of education of natives of Alaska and chief of the Alaska Division, Alaska.

EMPLOYEES IN THE WASHINGTON OFFICE.

William Hamilton, Alaskan assistant, Pennsylvania.

David E. Thomas, clerk, Massachusetts.

Julius C. Helwig, junior clerk, Indiana.

Mrs. Lottie E. Condron, stenographer and typewriter, District of Columbia.

EMPLOYEES IN THE SUPPLY AND DISBURSING OFFICE, SEATTLE.

Harry C. Sinclair, supply agent, Maryland.

Alexander H. Quarles, special disbursing agent, Georgia.

Chauncey C. Bestor, clerk, Washington.

Miss Florence P. Hutchinson, stenographer and typewriter, Washington.

EMPLOYEES IN ALASKA.

Superintendents.

Andrew N. Evans, district superintendent of schools in the northwestern district of Alaska, Nome.

George E. Boulter, district superintendent of schools in the upper Yukon district of Alaska, Tanana.

Henry O. Schaleben, district superintendent of schools in the southwestern district of Alaska, Seward.

William G. Beattie, district superintendent of schools in the southeastern district of Alaska, Juneau.

Special disbursing agent and assistant to the district superintendent of schools in the northwestern district of Alaska.

Walter C. Shields, Nome.

Physicians.

Henry O. Schaleben, M. D., superintendent southwestern district, Seward.

Paul J. Mahone, M. D., Juneau.

Bruce H. Brown, M. D., Russian Mission and lower Yukon region.

Daniel S. Neuman, M. D., Nome.

Linus H. French, M. D., Nushagak.

Ovid B. Orr, M. D., Akhiok, Kodiak Island.

Milton H. Foster, M. D., Public Health Service, on special detail, July 1 to September 8, 1911.

Emil Krulish, M. D., Public Health Service, on special detail, after April 21, 1912.

Contract physicians.

H. R. Marsh, M. D., Point Barrow.

Curtis Welch, M. D., Council.

Nurses and teachers of sanitation.

Miss Angelica A. Babbitt, Killisnoo.

Miss Louise C. McConnel, southeastern district, July 23, 1911, to April 20, 1912.

Miss Jean V. Rankin, Juneau.

Miss Elsie H. Peterson, Juneau, February 17, 1912, to June 30, 1912.

Mrs. E. C. Seward, Nushagak.

Mrs. Rebekah B. Young, southwestern district.

Mrs. C. W. Hawkesworth, Hydaburg.

Miss Louise C. MacCormac, upper Yukon district, July 1 to August 31, 1911.

Contract hospitals.

Holy Cross Hospital, Nome.

Fairhaven Hospital, Candle.

TABLE 1.—*Teachers, school attendance, and length of term, 1911-12.*NORTHWESTERN DISTRICT—ARCTIC OCEAN AND BERING SEA REGIONS, AS FAR
SOUTH AS CAPE NEWENHAM.

Schools.	Teacher.	Appointed from—	Average daily attendance.	Enrollment.	Length of term in months.
Akiak.....	John H. Kilbuck.....	Alaska.....	32	46	12
Akulurak.....	Mary Laurentia.....	do.....	41	50	7
Barrow.....	Delbert W. Cram.....	Washington.....	67	98	12
Do.....	Mrs. Belle C. Cram.....	do.....			
Do.....	Alice Ahlook.....	Alaska.....			
Bethel.....	Samuel H. Rock.....	do.....	21	30	8
Council.....	Charles W. Snow.....	Maine.....	16	34	9
Deering.....	Iva Kenworthy.....	Alaska.....	24	63	8
Diomedes.....	James H. Hamilton.....	Indiana.....	16	33	10
Do.....	Charles Menadelook.....	Alaska.....			
Gambell.....	Miss A. C. Anderson.....	Nebraska.....	55	143	12
Do.....	Theoline Ingwaldsen.....	Washington.....			
Golovin.....	Anna A. Hagberg.....	Illinois.....	37	56	8
Do.....	Mary K. Westdahl.....	Alaska.....			
Goodnews Bay.....	Claude M. Allison.....	Washington.....	22	68	12
Hamilton.....	Oscar M. Groves.....	do.....	11	22	8
Hooper Bay.....	Charles F. Richardson.....	do.....	30	92	12
Icy Cape.....	James V. Geary.....	California.....	16	37	12
Do.....	Mrs. Eva W. Geary.....	do.....			
Do.....	Hannah C. Ahnevuk.....	Alaska.....			
Igloo.....	H. D. Reese.....	Pennsylvania.....	18	41	12
Kinak.....	John W. Lively.....	Washington.....	12	38	12
Kivalina.....	Raymond A. Bates.....	Alaska.....	19	56	10
Do.....	Margaret E. Bates.....	do.....			
Koserefsky.....	Mary Bernadette.....	do.....	100	104	8
Do.....	Onesime Lacouture.....	do.....			
Kotzebue.....	Mrs. Lucy W. Cox.....	California.....	30	69	7
Do.....	Marie MacLeod.....	Alaska.....			
Koyukuk.....	Chester C. Pidgeon.....	Washington.....	7	35	12
Louden.....	Mrs. Ella E. Eby.....	Alaska.....	9	29	9
Mountain Village.....	Walter E. Cochran.....	West Virginia.....	11	22	12
Do.....	Mrs. Minnie Cochran.....	do.....			
Noatak.....	Elmer M. Harnden.....	Washington.....	27	34	12
Nome.....	Walter H. Johnson.....	Alaska.....	19	40	12
Nulato.....	Mary W. Salley.....	do.....	36	53	8
Pilot Station.....	Mrs. Catherine Kilborn.....	Pennsylvania.....	17	59	10
Point Hope.....	Fred M. Sickler.....	Indiana.....	26	93	10
Quinhagak.....	Mrs. Anna C. Rehmel.....	Iowa.....	18	37	9
Russian Mission.....	Mrs. Clara M. Brown.....	Missouri.....	9	14	7
St. Michael.....	Ernest W. Hawkes.....	South Dakota.....	21	86	12
Do.....	Annie Aloka.....	Alaska.....			
Selawik.....	Leslie G. Sickles.....	Washington.....	22	59	12
Shageluk.....	H. Ray Fuller.....	do.....	12	29	12
Shishmaref.....	George B. Hefler.....	do.....	22	36	10
Shungnak.....	Charles D. Jones.....	do.....	31	61	11
Sinuk.....	William B. Van Valin.....	do.....	15	31	9
Teller.....	Jorgine Enestvedt.....	do.....	9	20	8
Unalakleet.....	Elmer E. Van Ness.....	Tennessee.....	48	89	10
Do.....	Mrs. Eula W. Van Ness.....	do.....			
Do.....	Samuel Anaruk.....	Alaska.....			
Do.....	Ebba Tomron.....	do.....			
Wainwright.....	Fay R. Shaver.....	Washington.....	21	45	12
Wales.....	Mattie Caldwell.....	Missouri.....	52	64	12
Do.....	Arthur Nagozruk.....	Alaska.....			
Total.....			999	2,016	

TABLE 1.—*Teachers, school attendance, and length of term, 1911-12—Continued.*UPPER YUKON DISTRICT—VALLEYS OF THE YUKON AND ITS TRIBUTARIES
BETWEEN 141° AND 156°.

Schools.	Teacher.	Appointed from—	Average daily attendance.	Enrollment.	Length of term in months.
Circle.....	Ethel Ellis.....	Missouri.....	9	19	8
Eagle.....	Mary L. Hammond.....	Alaska.....	8	16	8
Kokrines.....	Julius Jette.....	do.....	6	16	7
Stevens Camp.....	Lawyer E. Rivenburg.....	New York.....	16	47	12
Tanana.....	Miss Orah D. Clark.....	Washington.....	7	25	9
Yukon.....	Gertrude K. Nielsen.....	do.....	16	50	10
Total.....			62	173	.....

SOUTHWESTERN DISTRICT—BERING SEA REGION, SOUTH OF CAPE NEWENHAM,
AND NORTH PACIFIC COAST REGION WEST OF 141°.

Akhiok.....	Mrs. Viola E. Orr.....	California.....	20	53	8½
Atka.....	Harry G. Seller.....	Washington.....	28	49	12
Do.....	Mrs. Katherine D. Seller.....	do.....			
Chignik.....	Jessamine E. Millikan.....	Indiana.....	16	26	4
Chogiung.....	Mary Watson.....	Washington.....	23	57	12
Copper Center.....	Lucius A. Jones.....	do.....	7	26	12
Uiamna.....	Hannah E. Breece.....	Alaska.....	22	40	12
Kanakanak.....	Thomas W. Schultz.....	Pennsylvania.....	11	28	12
Kenai.....	Willietta E. Dolan.....	Oregon.....	39	82	10
Do.....	Alice M. Dolan.....	do.....			
Kogiung.....	John J. Cavana.....	Alaska.....	14	26	8
Kulukak.....	Warren L. Call.....	Washington.....	25	54	12
Do.....	Mrs. Corinne Call.....	do.....			
Nushagak.....	Mrs. Lydia Y. Fountain.....	New York.....	19	42	10
Seldovia.....	Preston H. Nash.....	Washington.....	22	33	8
Susitna.....	Jessamine E. Millikan.....	Indiana.....	20	31	8
Patitlek.....	Chesley W. Cook.....	Washington.....	22	39	12
Do.....	Mrs. Mary Cook.....	do.....			
Togiak.....	John S. Calkins.....	Montana.....	13	28	12
Pryonek.....	Harry N. Cooper.....	Washington.....	37	56	10
Ugashik.....	John C. Lowe.....	do.....	17	39	12
Unalaska.....	Noah C. Davenport.....	do.....	53	70	12
Do.....	Mrs. Clara E. Davenport.....	do.....			
Do.....	Mrs. Mary Lavigne.....	Alaska.....			
Total.....			408	779	.....

SOUTHEASTERN DISTRICT—NORTH PACIFIC COAST REGION EAST OF 141°.

Craig.....	Edna L. Freeman.....	Alaska.....	17	45	3
Douglas.....	Esther Johnson.....	Oregon.....	20	71	7
Do.....	Isabelle S. Thursby.....	Illinois.....			
Haines.....	Benjamin B. McMullin.....	Washington.....	15	49	7
Hoonah.....	Elnora Ginther.....	Oregon.....	31	111	7
Hydaburg.....	Charles W. Hawkesworth.....	Alaska.....	33	55	12
Do.....	William L. Hughes.....	Washington.....			
Do.....	Flora A. Hughes.....	do.....			
Juneau.....	Mrs. Marie B. Slightam.....	Alaska.....	14	79	8
Kake.....	Mrs. A. C. Martin.....	do.....	26	71	5
Kasaan.....	Miss Nora Dawson.....	Missouri.....	13	25	7½
Killisnoo.....	Helen C. Moyer.....	Washington.....	24	49	7
Klawock.....	Cora B. Hawk.....	Pennsylvania.....	22	55	7½
Do.....	Verna Mercer.....	Ohio.....			
Do.....	Edith Z. Mercer.....	do.....			
Klukwan.....	Nellie M. Taylor.....	Nebraska.....	21	64	7
Klinquan.....	Charles W. Hawkesworth.....	Alaska.....			
Loring.....	Mrs. Leona Goodheart.....	Washington.....	11	22	6
Petersburg.....	Merle J. Gibson.....	do.....	7	36	7½
Saxman.....	A. Charlotte Doren.....	Alaska.....	9	50	7
Shakan.....	Carl A. Swanson.....	Minnesota.....	12	42	7
Sitka.....	Cassia Patton.....	Alaska.....	28	110	8
Do.....	Jeannette H. Wright.....	Washington.....			
Wrangell.....	Mrs. Ida M. Pusey.....	Iowa.....	16	56	7½
Yakutat.....	Elof M. Axelson.....	Illinois.....	17	60	9
Total.....			336	1,050	.....
Grand total.....			1,805	4,018	.....

TABLE 1.—*Teachers, school attendance, and length of term, 1911-12—Continued.*

TRAVELING TEACHERS.

Schools.	Teacher.	Appointed from—	Average daily attendance.	Enrollment.	Length of term in months.
Unalakleet.....	Misha Ivanoff.....	Alaska.....	.....	.....	.....
Nome.....	Thomas Illayok.....	do.....	.....	.....	.....

Summary of averages of Table 1, 1911-12.

	Daily attendance per school.	Enrollment per school.
Northwestern district.....	26	53
Upper Yukon district.....	10	29
Southwestern district.....	23	43
Southeastern district.....	19	58
All schools.....	23	50

TABLE 2.—*Comparative statistics, Alaska school service, 1907-1912.*

	1907	1912	Increase.
Schools.....	52	80	28
Superintendents.....	3	4	1
Assistant superintendent.....		1	1
Regular teachers:			
White.....	54	95	41
Native.....	5	12	7
Traveling teachers (natives).....		2	2
Total teachers.....	59	109	50
Nurses and teachers of sanitation.....		8	8
Regular physicians.....		5	5
Superintendent serving also as physician.....		1	1
Contract physicians.....		2	2
Physicians from Public Health Service (on special detail).....		1	1
Total in work pertaining to health.....		18	18
Total number of superintendents, assistant superintendents, physicians, nurses, and teachers under appointment in Alaska.....	62	127	65
Number of unmarried appointees.....		52	.....
Number of married appointees.....		75	.....
Number of persons not under appointment who accompanied appointees.....		37	.....
Total number of field workers.....		164	.....
School buildings erected, 1907-1912.....			48

TABLE 3.—*Summary of expenditures from the fund for "Education of natives of Alaska 1911-12."*

Appropriation.....	\$200,000.00
Salaries of officials and clerks.....	\$14,180.17
Salaries of superintendents.....	9,680.00
Salaries of teachers.....	86,004.84
Traveling expenses of inspectors, superintendents, and teachers.....	11,403.55
Textbooks, stationery, apparatus, furniture, and industrial supplies.....	18,074.05

Fuel and light.....	\$15, 595. 20	
Local expenses.....	2, 018. 97	
Repairs and rent.....	4, 613. 83	
Erection of buildings.....	10, 022. 73	
Sanitation and medical relief.....	25, 144. 50	
Relief of destitution.....	1, 394. 95	
Expenses of offices.....	1, 485. 94	
Reserved for contingencies.....	381. 27	
Total.....		\$200, 000. 00

THE ALASKA REINDEER SERVICE.

The reports from the reindeer stations for the fiscal year ended June 30, 1912, show a total of 38,476 reindeer, distributed among 54 herds. Of the 38,476 reindeer, 24,068, or 62.5 per cent, are owned by 633 natives; 3,776, or 9.8 per cent, are owned by the United States; 4,511, or 11.7 per cent, are owned by missions; and 6,121, or 16 per cent, are owned by Lapps.

At an average value of \$25 per head, the 24,068 reindeer owned by the natives represent a capital of \$601,700. The total income of the natives from the reindeer industry during said fiscal year, exclusive of the value of meat and hides used by the natives themselves, was \$44,885.04.

The reindeer industry affects the entire coastal region from Point Barrow to the Alaska Peninsula—a region approximating in length the distance from Maine to South Carolina. A line connecting the 54 herds would be more than 5,000 miles in length.

There are 633 native owners of reindeer, whose immediate families number approximately 2,500; in addition, approximately 4,000 natives are affected by the reindeer enterprise, obtaining reindeer products in exchange for their own wares. Accordingly, the total number of natives affected by the reindeer enterprise may be estimated to be about 6,500. Attention is especially invited to the statements included in Tables 9 and 10, which set forth the cost and results of the introduction of reindeer among the natives of Alaska.

There yet remain to be reached by the reindeer industry in Alaska the upper Kuskokwim and the Copper River regions and the coast east of Point Barrow; also Nunivak, Kodiak, and the Aleutian Islands. The establishment of herds in these regions will complete the means for gradually stocking with reindeer all of the untimbered regions of Alaska adapted for that industry.

During August, 1911, 40 reindeer from the herd at Unalakleet were delivered to the Department of Commerce and Labor, 25 were placed on St. Paul Island and 15 on St. George Island. In June, 1912, the reindeer on St. Paul Island had increased to 40 and those on St. George to 25.

[illegible]

By purchase or inheritance.

• Included in total

Estimated.

No report received; all figures estimated.

TABLE 5.—*Increase in reindeer service from 1907 to 1912.*

	1907	1912		1907	1912
Total natives owning reindeer.....	114	633	Sled reindeer:		
Herders and owners.....	57	472	Trained.....	445	1,281
Government apprentices.....	17	72	Partly trained.....	77	211
Mission apprentices.....	28	30	Income of natives from reindeer..	\$7,783	\$44,885
Lapp apprentices.....	7	2	Total income from reindeer.....	\$9,563	\$60,432
Herders' and owners' apprentices..	27	57	Percentage of reindeer owned by—		
Total apprentices.....	79	161	Government.....	23.0	9.8
Reindeer owned by natives.....	6,406	24,068	Missions.....	22.0	11.7
			Lapps.....	14.0	16.0
			Natives.....	41.0	62.5

TABLE 6.—*Number of reindeer belonging to each class of owners in 1911-12.*

Owners.	Number of reindeer.		Increase or decrease.		Per cent owned.	
	1911	1912	Number.	Per cent.	1911	1912
Government.....	3,951	3,776	— 175	— 4	11	9.8
Missions.....	4,663	4,511	— 152	— 3	14	11.7
Lapps.....	4,944	6,121	+1,177	+24	15	16.0
Natives.....	20,071	24,068	+3,997	+20	60	62.5
Total.....	33,629	38,476	+4,847	+14	.....	.....

TABLE 7.—*Annual increase and decrease of reindeer.*

Years.	Balance from previous year.	Fawns surviving.	Imported from Siberia.	Butchered or died.	Total in herd June 30.	Per cent of annual increase.	
						By fawns.	Net (since importation ceased).
1892.....			171	28	143	.....	.....
1893.....	143	79	124	23	323	55	.....
1894.....	323	145	120	96	492	45	.....
1895.....	492	276	123	148	743	56	.....
1896.....	743	357	.....	100	1,000	48	.....
1897.....	1,000	466	.....	1,334	1,132	46	.....
1898.....	1,132	625	161	185	1,733	55	.....
1899.....	1,733	638	322	299	2,394	37	.....
1900.....	2,394	756	29	487	2,692	32	.....
1901.....	2,692	1,110	200	538	3,464	41	.....
1902.....	3,464	1,654	30	353	4,795	48	.....
1903.....	4,795	1,877	.....	390	6,282	39	31
1904.....	6,282	2,284	.....	377	8,189	36	30
1905.....	8,189	2,978	.....	926	10,241	36	25
1906.....	10,241	3,717	.....	1,130	12,828	36	25
1907.....	12,828	4,519	.....	1,508	15,839	35	23
1908 ²	15,839	5,416	.....	1,933	19,322	34	21
1909 ²	19,322	6,437	.....	2,844	22,915	33	18
1910 ²	22,915	7,239	.....	2,829	27,325	32	19
1911 ²	27,325	9,496	.....	3,192	33,629	35	23
1912 ²	33,629	11,254	.....	6,407	38,476	33	14
Total.....	.....	61,323	1,280	24,127	.....	² 41	² 23

¹ 246 killed in Barrow relief expedition.² Some of the figures which make up these totals are estimated.³ Average.

TABLE 8.—*Expenditure of appropriation "Reindeer for Alaska, 1912."*

Appropriation.....	\$12, 000. 00
Salaries of chief herders.....	\$520. 00
Support of apprentices.....	9, 931. 76
Establishment of new herds.....	675. 00
Reserved for contingencies.....	873. 24
Total.....	12, 000. 00

TABLE 9.—*Showing cost and results of introduction of reindeer in Alaska.*

	First ten years (1893- 1902).	Next five years (1903- 1907).	Last five years (1908- 1912).	Total.
Appropriations.....	\$133, 000	\$99, 000	\$60, 000	\$292, 000
Number of herds established.....	9	7	33	54
Number of natives owning reindeer.....	68	56	419	633
Average cost per native apprentice.....	\$2, 000	\$1, 800	\$143	\$475
Net number of reindeer received by natives.....	2, 841	3, 565	17, 662	24, 068
Valuation of same.....	\$71, 025	\$89, 125	\$441, 550	\$601, 700
Income received by natives.....	\$4, 500	\$5, 500	\$132, 510	\$142, 510
Number of Government reindeer at end of period.....	2, 247	4, 684	3, 776	3, 776
Valuation of same.....	\$56, 175	\$117, 200	\$94, 400	\$94, 400

TABLE 10.—*Showing wealth produced by introduction of reindeer in Alaska.*

Valuation of 24,068 reindeer owned by natives in 1912, at \$25 each.....	\$601, 700
Total income of natives from reindeer, 1893-1912.....	142, 510
Valuation of 14,408 reindeer owned by missions, Laplanders, and Govern- ment, 1912.....	360, 200
Total income of missions and Laplanders from reindeer, 1893-1912.....	57, 650
Total valuation and income.....	1, 162, 060
Total Government appropriations, 1893-1912.....	292, 000
Gain (298 per cent).....	870, 000

TABLE 11.—*Reindeer loaned and transferred to missions and Laplanders.*

Station or individual.	Number loaned.	When loaned.	Expiration of loan.
Bahr, O. O. (Unalakleet).....	100	July 1, 1901	June 30, 1906
Bals, N. P. (Eaton).....	100	Mar. —, 1906	Mar. —, 1911
Bals, P. N. (Eaton).....	100	Mar. —, 1906	Mar. —, 1911
Bango, I. (Tanana).....	100	Mar. —, 1906	Mar. —, 1911
Bethel (Moravian).....	176	Feb. 26, 1901	Feb. 26, 1906
Deering (Friends).....	100	Jan. 18, 1905	Jan. 18, 1910
Golofnin (Swedish Evangelical).....	50	Jan. 16, 1896	Jan. 16, 1899
Klemetsen, N. (Golofnin).....	100	July 1, 1902	June 30, 1907
Kotzebue (Friends).....	95	Sept. 2, 1901	Sept. 2, 1906
Nilima, A. S. (Kotzebue).....	99	July —, 1901	June 30, 1906
Nulato (Roman Catholic).....	100	Mar. —, 1901	Mar. —, 1906
Sara, N. P. (Bethel).....	100	July —, 1901	June 30, 1906
Sinuk (Methodist).....	100	Oct. 29, 1907	Transfer.
Do.....	49	Jan. 27, 1910	Do.
Spein, P. M. (Bethel).....	100	July —, 1901	June 30, 1906
Tanana (Episcopal).....	100	Mar. —, 1906	Mar. —, 1911
Teller (Norwegian Lutheran).....	100	Sept. 1, 1900	Sept. 1, 1905
Unalakleet (Swedish Evangelical).....	140	July 1, 1903	June 30, 1908
Wales (Congregational).....	118	Aug. —, 1894	Transfer.

In December, 1905, the herd at Nulato was transferred to the Roman Catholic mission at Koserefsky, and in 1908 from Koserefsky to Mountain Village, where it was cared for temporarily by the Government in connection with the Government herd at that station. In December, 1911, the herd was returned to Koserefsky from Mountain Village.

All of which is respectfully submitted.

W. T. LOPP,
Chief of Alaska Division.

The COMMISSIONER OF EDUCATION.

PART II.—DETAILED REPORTS.

The purpose of Part II is to give to the public, to those engaged in the service of the Bureau of Education in the various regions of Alaska, and to others desiring such employment, detailed information regarding the work of the Bureau of Education among the natives of Alaska.

Section I contains the annual reports of six of the teachers in widely separated parts of Alaska, illustrating the broad, practical character of the work, and setting forth the various duties performed by teachers in the Alaska school service.

Section II relates to the medical work among the natives, and contains (1) the report of Dr. Emil Krulish, of the Public Health Service, on health conditions among the natives; (2) the report of Dr. P. J. Mahone, on the United States hospital for natives at Juneau; and (3) the report of Dr. B. H. Brown, physician, assigned to the lower Yukon district.

SECTION I.—REPORTS BY TEACHERS.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT AKIAK, A REMOTE VILLAGE ON THE KUSKOKWIM RIVER, HITHERTO WITH- OUT A SCHOOL.

By JOHN H. KILBUCK, Teacher.

On the evening of July 5, 1911, the *P. J. Abler*, with the teachers for Akiak on board, slowly steamed past the fishing camp about 3 miles below the village of Akiak, and the pilot, David Hawk Skuviuk, called out to the men to come up and help unload the ship. There were shouts from the shore; in a twinkling canoes were launched and forthwith a chase ensued, wherein the *Abler* had to burn more oil to keep ahead of the pursuers. At 6.10, according to the ship's time, Akiak was reached, and as the water was high the vessel anchored close under the bank, ending her voyage of 24 days from Seattle with all on board in high spirits. In a few minutes I was ashore and was heartily welcomed by the natives, who had arrived almost as soon as we did. Accompanied by Kawagleg, the local chief, I at once looked over the ground. A site was selected at the lower end of the village, on ground that had hardly been covered by the last spring freshet, which was reported to have the record for high water.

The next day the ship was discharged of her freight, and at 3.30 everything was ashore. In a short time we wished our late shipmates a safe and pleasant homeward voyage, and then turned to our work.

We found our stores and supplies in good shape, and in order to keep them so I had bought a large sail from Capt. Born, with which to protect them against the weather, pending the completion of the school building. One of the natives placed at our disposal his two-room cabin; this we made our home until the schoolhouse was finished. Other natives gave us the use of their cabins, in which to store some of our perishable provisions.

The fishing season was not over yet; so for some time we had but little help from the natives. Mr. Hansen, the carpenter, began his work at once, while I, single-handed, cleared the schoolhouse site and grounds of timber and dug the foundation. Our task was rendered extremely difficult by the mosquitoes that swarmed down upon us. The house was finished August 28. It is a neat structure and is the first of its kind on this river. Everyone who has seen it admires it.

When we arrived at Akiak there were 5 log cabins altogether above the ground, 2 cabins partially under the ground, and 4 of the old-fashioned igloos; 11 habitations, occupied by 19 families. After the fishing season was over the natives returned to the home village. The attractive appearance of the schoolhouse appears to have prompted the desire for improvement; many began to work, some renovating their cabins and others building new ones. As each cabin neared completion, a few pieces of scrap lumber were furnished by the teacher in charge for the natives to use in making window and door frames and doors. A little red paint was also given for finishing. When a cabin was ready for occupancy, Mrs. Kilbuck hung a curtain over each window. After the first cabin was thus furnished, a building boom followed. Every head of a family who was able to work went to work on a cabin. The men had to go out and get a raft of logs before any building could be done, and then they worked like beavers. When cold weather set in there were 6 new cabins, the 2 that were partly under ground had been rebuilt on top of the ground, and 3 of the old cabins were remodeled. Akiak now consists of 13 cabins above ground, 1 cabin partly under ground, and 3 igloos; altogether 17 habitations, that house 90 people.

A few days after landing some ground was spaded up, which, after being prepared, was sown to radishes, lettuce, and turnips. The natives were skeptical about the garden producing anything, but when the seeds sprouted one man spaded up a small bed and worked faithfully to get the ground in fine shape. This bed was sown to radishes. Everything did well, and our table was furnished with choice radishes and crisp lettuce. The native was also duly rewarded for his venture by messes of radishes. The turnips did not do so well, for the rabbits ate the tops. The school children got what the rabbits left. This success with the first experiment in gardening resulted in a general desire to learn how to grow vegetables. Six householders fenced in plats of their own and spaded up the soil. About a quarter of an acre next to the schoolhouse was cleared of timber, the stumps and roots were grubbed out, and about half of it spaded. The school children were put to work in this garden, as well as in cleaning up around the schoolhouse, burning the brush, old logs, and rubbish. Including the school garden, there are now 10 gardens, which together would cover about three-fourths of an acre. Cabbage, cauliflower, potatoes, turnips, rutabagas, peas, beans, red beets, onions, celery, rhubarb, spinach, radishes, and lettuce constitute our crops. We are short on seed potatoes, but we hope to raise enough to make this the main crop for the natives next year. We obtained a few pounds of native potatoes from Bethel. On account of the infection of the imported potato with some kind of a worm or bug, we did not plant them. If the gardens produce a good crop this year, the natives will undoubtedly take up gardening in earnest. We have furnished seeds to natives in other villages, as well as to miners.

Classroom work was taken up October 9 and continued until the end of March, when, owing to an attack of the grippe, I was laid up for a week. By that time the people had moved to the mountains for the spring trapping of squirrels.

The schoolroom has a seating capacity of 28, while I often had more than 40 in attendance. The total enrollment for the year was 47, and 129 days were taught, with an average attendance of 29.66. Two pupils had to be put where there should be only one. The children were naturally quiet and well-behaved, otherwise this doubling up would not have worked out as well as it did. The majority of the pupils were of kindergarten grade, only a few having ever been in a school before. From the beginning to the end of the school term there was no disposition manifest to shirk in attendance or application. Whenever the bell rang every child came on the run, and even the 2 and 3 year olds would slip away from their mothers and come toddling toward the schoolhouse. The branches taught were reading, arithmetic and numbers, writing, spelling, geography, and English. Most of the time was devoted to instruction in English, oral and written. Some of the pupils who had attended school at Bethel could read well, but were deficient in composition and arithmetic. Writing from dictation was also a part of each day's work. The children all showed special aptitude for writing, and some of them improved surprisingly fast. In number work the toy money was one of our best aids in compelling interest. The natives of Akiak had never had any use for numbers except in mere counting. It was therefore rather difficult to arouse any interest in arithmetic. The manner of life has, however, so changed on this river that the people now recognize the need of being familiar with the processes of addition, subtraction, multiplication, and division, especially with reference to money. With the toy money the more advanced pupils got as far as adding up a bill of groceries, and some could make out a bill when the unit price of each item was given. All the larger girls had a course in sewing and general housework. They also did the sweeping, dusting, and tidying of the schoolroom every day, and scrubbing it every week, except in very cold weather. The boys looked after the wood box, keeping wood on hand and shavings for starting the fires. On account of the limited space, we did not attempt physical exercises. On a number of occasions, when the scholars were restless, I took the whole school out of doors and had them run a race down to the river bank and back into the schoolroom. The children then would settle down and do good work for the rest of the session. The schoolroom, though small, is well ventilated, and there was no trouble about keeping the air pure.

In village work our endeavor has been to identify ourselves with the people, taking part in anything that affects their welfare. We visit them in their homes as neighbors, much in the same way as they visit each other. In these visits we never criticize the way they keep house or their personal appearance, but we treat them with the same respect we would a neighbor in the States. We always remember that we are guests, and they are the hosts. Official talks were given in the schoolroom. All the people gathered regularly on Friday evenings. The time at each meeting was devoted to music from a graphonola and a short talk on sanitation, or some other topic of general welfare. Our home has always been open; the people have been made to feel welcome to come and visit us. Our home has been used as a classroom for teaching sewing and bread making. It is noteworthy that our neighbors have been very thoughtful, and we never felt that we were imposed upon. Even the small children behaved well, and we were never alarmed about their spoiling anything or bringing dirt into the house. The results we have noticed are these: More soap is being used; more people wear clean garments; more people bathe regularly once a week; the air in most of the cabins is pure; the floors are scrubbed weekly and are less cluttered up; every fair day we see bedding flapping in the wind, and socially the people say they have never lived together so harmoniously.

One of the features of the Thanksgiving Day celebration was the taking up of a collection for the poor. This is a custom inaugurated soon after the people became Christianized. The contributions amounted, in money value, to about \$42, of which \$20 was distributed to a number of widows and the balance is still in the keeping of the teacher in trust.

There are 90 souls in the village of Akiak, distributed according to age and condition as follows: eight old people, i. e., 50 years and over, 3 of whom are widows more or less dependent; 16 couples and 1 widow of middle age; 4 unmarried young men, and 46 minors. The entire village is Christianized, all of the people being church members, the majority belonging to the Moravian mission and the rest to the Greek Catholic Church. This village was among the first to adopt Christianity. Drunkenness is unknown, and there is a unanimous desire to keep liquor and white men out of the village. Four of our young men are employed as chief herders, three by the Government and one by the mission. Six families are in close touch with the reindeer industry through a son who is either a herder or an apprentice and through a daughter married to a deer man. One man has become an owner of deer by investing in two female deer his earnings of the past winter as a trader. Fishing and trapping are the principal means of support. The opportunity to earn flour, tea, and sugar right at home this past year by work on the schoolhouse and the sale of wood has been a great boon to the village. We have learned to know the people more intimately, and we find them to be industrious, tractable, and hospitable.

CONDITIONS AMONG THE NATIVES IN VILLAGES ON THE KUSKOKWIM ABOVE AKIAK.

In my trip from Akiak to Slitmiut I was impressed with the fact that the native population has decreased at least 50 per cent since 1900. This was caused by the epidemic of measles and pneumonia in 1900 and later by la grippe and diphtheria. The population now consists of the young generation—like the second growth of timber—with here and there a middle-aged person. I think the average age of the children would be about 6 or 7 years. The people in general appeared far from robust, although I met with no actual sickness.

The population is scattered along the river, from a family or two to a collection of five or six huts. Villages that were once populous are now either wholly abandoned or inhabited by 25 or 30 persons at most.

The old-fashioned igloos have almost altogether given place to the log cabins, some having two rooms, and all provided with stoves. The people appear to be better dressed than formerly, but there is much to be taught in personal cleanliness. I was surprised to find so many English-speaking individuals. There is a strong desire for schools and for reindeer among these people. When I explained the Government's desire to help them to learn how to live better, in order to make them healthier and longer-lived and how to make a living, their faces showed the encouragement they felt. In general, the natives welcome the idea of schools and clamor for the domesticated reindeer, and this attitude of the natives has the support of the white population now in the country. I find that the feeling here is in favor of the Indian. There is even a real feeling of pride in the aptitude of the native to make the best of his present conditions and surroundings. Among the natives there is a very evident desire to keep away from the white men. They wish to live by themselves, and they would like to have the whites do the same.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT SHISH-MAREF, AN ESKIMO VILLAGE NORTH OF BERING STRAIT.

By Mr. and Mrs. GEORGE B. HEFLER, Teachers.

The principle which we have been trying to inculcate during the entire year is ambition. The children were so content to "let well enough alone" that it was next to impossible to lift them from the rut. At first we could not understand such utter listlessness in the classroom, such appalling unconcern as to progress. But when we came to understand the Eskimos better we felt that the whole thing reverted to the

old problem of heredity and environment. Heredity seems to have predominated here in Shishmaref, but it is certainly time for civilization to step in and create an environment that will gradually wean the children away from the ancestral habits. Of course that is only possible here through the school environment, as the home environment of the children is practically the same as it was generations ago.

These people are essentially materialists. They desire education only for its material advantages. Remembering this, we have tried to show them the actual benefits, physical, economic, and moral, that are the results of education.

Reading.—One of the most urgent needs in the school work here is a textbook easily understood by the Eskimo children. The textbooks provided, although admirable from a white child's standpoint, treat of subjects utterly foreign to an Eskimo child's comprehension. What is needed is a book treating of Eskimo life and familiar objects, written for the Eskimos, not about them. We tried to fill this need temporarily with a homemade Eskimo primer for the three little boys who were starting school for the first time. This book was written in ink in the blank books, and illustrated with pen and ink sketches. The reading lessons dealt with subjects of everyday life here, such as hunting the seal, walrus, ptarmigan, ducks, and geese, driving reindeer and dogs, and catching fish, described in terms of common use. The children learned to speak English as well as to read it, two things by no means the same as one.

Arithmetic.—Many people say the Eskimo has a receptive, but not an analytical, mind; that he can easily learn the abstract functions of arithmetic, but can not apply them to concrete problems. This was our first impression. We found later, however, that it was not so much the principle they failed to grasp as it was the English. They seemed to find no difficulty in solving a problem given in simple English about familiar things. The older children covered addition, subtraction, multiplication, and division, and were able to solve simply worded problems involving one or more of these principles. For instance, a problem might involve the cost of a certain number of sacks of flour in Seattle and take up also the cost of the freight to Shishmaref, together with the selling price per sack of the flour here, in order that a certain profit might be made. We found the boys especially eager in this work. One boy could do almost any problem set before him.

Industrial work.—The great aim of the United States public schools in Alaska is to help the natives help themselves. There is no better way to do this than by instruction in the manual and domestic arts. If we teach them the use of tools, they are then better prepared to build and maintain homes; and if we teach them domestic science, the home can be kept more healthful and pleasant. Aside from this, a completed model, a neatly sewed dress, or a batch of well-browned bread can not fail to arouse something of the creative joy, a satisfaction in a task well done.

Household arts.—There were but 7 girls in the school big enough to learn to make bread, biscuit, etc., and 1 of these went away for two months with her family. All these girls learned to make bread and biscuit.

Sewing.—In the wreck of the *Redfield* the Government supply of sewing materials was lost. As there is no store nearer than 60 miles, and as the prices were very high, we were handicapped for materials. The older girls made dresses for most of the babies in the village. There is a noticeable difference here between the children of those who have gone to school and the children of the women who cling to the customs of the older generation. The girls who had been to school seem to take great delight in making little garments for the babies, while the older women look upon it as a waste of time.

Laundry work.—All the girls and most of the boys were taught to wash clothing, bedding, and household linen. Every Saturday the schoolhouse was reserved for their use, and so many were desirous of washing that the number had to be limited to eight at a time. After awhile the spirit of cleanliness so imbued them that they not only washed their own clothing, but also that of their younger brothers and sisters.

Visitors.—Many parents visited the school and showed their delight at the progress of the children in learning to talk English and in doing useful things. The quickest way to reach the hearts of these Eskimos is to teach the little children and let the parents see that you love the children and want to help them. The older people responded splendidly whenever asked to cooperate in any matter that concerned the little ones.

Medical work.—We have tried to show the natives that cleanliness is the enemy of sickness and that filth is a breeder of disease. A baby suffering from some form of skin disease proved a useful object lesson. The baby came from a dirty home of the old type, and its mother was of the old régime that knew not the virtues of soap and water. It is difficult to imagine a more distressing object than that baby when its mother brought it over for treatment. Its arms, legs, and body were covered with immense scabs, and when she removed the little fur bonnet its head was seen to be in similar condition. It was given a thorough bath in warm water and hydrogen peroxide. The mother thought the hydrogen peroxide was "plenty strong medicine" when she saw the white fuzz spout up wherever it touched the child's body. We impressed very strongly upon the mother that the filthy rags that clothed the baby must not be put on, and when she said she had no others we told her she must make some or the baby would never get well. Mrs. Hefler made the baby some underclothes and a bonnet, while the baby's older sister made the baby a dress in sewing period in school. The baby was inspected thoroughly and washed every day, and we saw to it that the clothes were kept clean. After repeated applications of hydrogen peroxide, blue ointment, and soap and water the baby became well. Whereas before she had been a sickly, crying baby, to-day the child is well, strong, and happy, and, above all, clean. That the mother was sufficiently impressed with the importance of cleanliness was shown in the fact that her only subsequent request was for soap to keep the baby and its clothes clean, so it would be "no sick." This case made quite a stir in the village, and the mothers kept the babies much cleaner than before. The children would come to me with cuts and ask for the "clean medicine."

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT WALES, AN ESKIMO VILLAGE NEAR CAPE PRINCE OF WALES, ON BERING STRAIT.

By Miss MATTIE CALDWELL, Teacher.

Truant officer.—Our school opened October 2, 1911, with an enrollment of 34. The number increased as the people returned from Nome and Kotzebue, where they had spent part of the summer trading, until we reached an enrollment of 64. The average attendance for the year was 50+. This per cent of attendance on enrollment was due in large measure to the faithful services of our native truant officer, and perhaps his success was due to the manner in which he was chosen. The men of the village met and discussed the need of such an officer, one of their number acting as chairman. The result of this meeting was the appointment of a committee of five whose business it was to select a man for the office. This the committee did in due time. In these meetings the teacher took part only as a "lay member." So completely was the matter left to the men of the village that they felt they must cooperate with the man they had chosen in the fulfillment of his duties. Most of the absences that occurred were due to sickness or necessary work.

Schoolroom work.—We are endeavoring to work out a grade system suited to local needs. At present our school comprises six grades: Kindergarten, beginners (using chart and primer), first, second, third, and fifth grades. Next year, according to present system, a fourth grade and a sixth grade will be added.

We have made instruction in English the basis of all of our work, teaching language "in season and out of season," by story and song, conversation and memory work, and by the reading of many books. Elementary arithmetic is dealt with in a practical way. Much work is done involving the handling of toy money, buying and selling from a "toy store," and the making of bills such as are necessary in everyday business transactions. We consider it more important that a boy learn how many gunnies of flour at \$4.95 he should receive for 3 fox skins at \$6.35 each, and 55 fox skins at 17½ cents each, or that a girl know how many yards of calico at 12½ cents she should receive for one pair of mukluks at \$2, than that he or she should be able to solve problem 83, page 143, of somebody's arithmetic.

History and geography were taught as much for the conversation they afforded as for their content.

Physiology was taught largely by means of chart and drawings. Temperance was emphasized and sanitation and hygiene were taught and demonstrated to some extent in the school. Eskimo children write well and draw well; their copy books would compare favorably with those of white children of similar age and grade. Special attention was given to letter writing among the older pupils.

We find all the boys and girls exceedingly fond of music. They have very "quick ears," but are not accurate in sustaining pitch; their voices are inclined to become "flat." The children of the lower grades have been taught many action songs, and they delight in singing them. They sing these songs at play and in the homes until the mothers and babes may be heard chanting the words of Little Bo Peep or Bow-Wow-Wow. They understand the tune, if not the words.

Note reading in the nine common keys was taught in 1910-11. This was followed by the learning of many new songs this year. Most of the girls sing soprano. The younger boys sing alto, and a few of the older boys have developed bass voices. We had choir rehearsal each Wednesday evening for the following Sunday services. This was a very material help to our school music.

Two school entertainments were given during the year; these were products of the English and music classes. While the exercises were simple, they showed creditable effort and some ability on the part of the children. Stage fright is practically an unknown quantity. The first program was given just before the Christmas holidays and a "tree" was one of the features. The second was given in April just before the large boys were excused to go walrus hunting. Most of the numbers were drills or songs. We need more books of easy dialogues and drills in our library at Wales. Material of this kind is very scarce. A set of books containing simple quartets and college songs would also be helpful.

We classified and numbered our books, appointed a librarian, and lent during the year 100 books. One boy borrowed and read 12 books. More books would be read if we only had them. A circulating library would be a good thing for the district. A case of books might remain at one place a year, then be sent to the next school the following year. In this circulating library might be included instructive games and other things to entertain and instruct the boys and girls. Sets of pictures could be used to great advantage.

Carpentry.—This branch of work has been in the hands of the native assistant, who has done exceedingly well, considering the materials he has had. His work with the 16 older boys includes the making of the following articles: One table, two benches, one settee, and an armchair. These constitute a child's set. Measurements and drawings were first made, then the pieces were constructed according to drawings. Doll chairs, window boxes, a nail box, coal bin, shelves, and other useful things were made.

In addition to this constructive work, the class kept the school building in repair, replacing broken windowpanes, mending doors, making ventilators, etc. We thought it just as important that they learn the care of public property as that they learn

the use of tools. We hope to carry this community work further next year by means of our city school government, which Mr. Hamilton, of Diomed Island, assisted us in organizing.

Sewing.—There were 8 girls in the class in sewing, and they did very good work. A few articles were made for general use from material belonging to the school, but the most important work was the making of 16 dresses for the 8 girls. They had hardly known the pleasure of owning a dress before.

Every piece of calico had been made into a parka, and it seemed to matter little what was under that. Last year we made gingham aprons from school material, and that gave an idea of the comfort and desirability of such garments. This year it was with much hesitancy that we requested the girls to ask their mothers for material for dresses. The people have so little money that it seemed asking a great deal. In response only one girl brought sufficient calico for a dress. Three others brought remnants ranging from 2 to 4 yards; this, with two or three old garments, was all the girls brought. I found a few old garments of my own, which we altered and used for the girls. When my supply was exhausted, I appealed to Mrs. Thompson, the missionary's wife, and she sent two partly worn wool skirts, which we made into jumpers for the last two. But one dress will not last forever, and as the time for our performance drew near, the girls were again requested to bring material for dresses. Not one failed this time. All were brightly arrayed in new calico or gingham commencement dresses. Caps, aprons, and sleeve protectors were made for the cooking class, also samplers, showing basting, hemming, backstitch, buttonhole, featherstitch, patching, and darning. In addition to this, the girls made 12 garments for Mrs. Thompson. Several of the young women who were not in school were assisted in making dresses.

Cooking.—Bread making and the cooking of native meats were the principal things taught in the kitchen. The making of seal-oil soap was demonstrated. Notebooks were kept in which were simple rules for care of the kitchen and for dish washing; recipes for bread making; cooking of cereals, meats, and fish. Notes were made also on the feeding of babies and the care of nursing bottles.

Personal hygiene.—It is difficult to say how much has been accomplished regarding personal cleanliness. Much attention was given to the subject. Kerosene, gasoline, and fine combs were used on the heads of the school children. Baths were given, and some of the boys were required to remain after school and wash their parka with soap and hot water. At one time during the winter a "protracted effort" lasting a week was made for the purpose of ridding the village of vermin. The insect population was greatly decreased. No doubt something has really been accomplished in this direction, though to a stranger visiting the village just at this time it might appear doubtful. The snow is melting; there are pools of water everywhere and sand between them. The children play in sand and water all day and all night, and the worst of it is that soap is very scarce now.

Village work.—There are many things to encourage the worker in our village, however. A marked improvement may be seen in the homes, the clothing, and the care of children among many of the younger women who have had the advantage of attending school and of observing the white man's way of living. Only one frame house has been built this year. There is no timber in this region, and few can afford to buy lumber. Disposal of garbage in winter is an unsolved problem; in summer the village is given one general cleaning.

One thing that is greatly needed at Wales is cold storage for preserving walrus meat. The present system is very bad. The meat is buried in holes in the ground in the month of June, and by the time it is needed for food it is greatly decomposed. With the idea of remedying this condition, two shafts were sunk during the fall, each 8 or 10 feet deep. It was thought that by digging down 12 or 15 feet the ground would be found sufficiently frozen to furnish an excellent cold storage. Work of this kind

progresses slowly. The older people are not inclined to change their customs, and the community spirit is not well developed. But a beginning has been made, and we are hopeful that the work may be completed.

A report of the sanitary condition of the village would be incomplete should we fail to mention the excellent work of Dr. C. A. Thompson, medical missionary. The people are slow to appreciate the services of a physician, but results this year have been gratifying. There have been 14 births in the village since September 1 and only 4 deaths. The Eskimos are passionately fond of their children. They have learned by sad experience that their methods of treatment often fail, and they are becoming more disposed to call upon the doctor for help. This is greatly reducing infant mortality.

Moral conditions generally are not bad. There is no drinking, no prostitution, and practically no stealing. On the whole, our people are a peaceable, law-abiding lot. Only one man was arrested during the year—a record that could probably not be surpassed by a white village of similar size. Some of the social practices among the Eskimos are not in accord with our standards, but these I would call unmoral rather than immoral. The great majority live mainly by hunting and fishing. A small amount of trading is done, but skins are not plentiful. Only a few depend directly upon their reindeer herds for a livelihood.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT KENAI, IN SOUTHWESTERN ALASKA.

By Miss W. E. DOLAN and Miss A. M. DOLAN, teachers.

Sewing.—Two hours a day were devoted to this work by 10 of the school girls; also, an evening class of 7 adult women was given instruction in sewing twice a week during the months of January, February, March, and a part of April. The classes were taught to cut out, fit, and sew by hand. Instruction in embroidery was given, in addition to plain sewing. The women were encouraged to come for suggestions and help in the making of their clothes at any other time. Many took advantage of this privilege. The following articles were made by the pupils and given as rewards for good work: Petticoats, shirts, aprons (colored and white), plain dresses, embroidered towels, fancy embroidered bags for Christmas presents, embroidered collars, abots, and doilies. The very small children made doll clothes. Great encouragement was felt from results as shown in neatness and general improved appearance of the native women.

Cooking.—Cooking classes were held once a week for the school girls. Night classes of two hours were held during January, February, March, and part of April once a week for the adult women. The object was to teach them cleanliness and neatness in cooking. They were taught to make bread, baking-powder biscuits, corn-meal cake, pies, plain cakes, chocolate cake, coconut cake, tea, and coffee, and salads from ingredients available in the region. Many of the natives have been living entirely on fish and moose meat, and therefore this work in cooking is answering a real need in helping to diversify the diet.

Agriculture.—In the early spring enthusiasm was aroused by talks about the preparation of hotbeds for cabbage and other vegetables. The seeds sent from Sitka were distributed. The pupils were taught how to prepare the soil and plant the seeds. The natives of the village were also encouraged to plant flowers and to improve their yards. The natives raise potatoes and the hardier vegetables. These they can use in preparing their meats, upon which they chiefly live.

Village work.—Periodic visits were made to the homes of the natives to instruct them in the care and cleanliness of their homes and persons and to cause them to

ventilate and air their houses. The pupils were kept looking clean and neat and freed from vermin by use of combs and creosote. The natives have constructed "bonyas"—steam houses for bathing purposes. We insisted on weekly baths. If a child was not clean, he was sent home to be washed. Only two such cases were necessary during the year. Sputum cups for home use were made from tin cans and sawdust to prevent the spreading of disease germs. Pupils were strictly forbidden to spit around school grounds and in school and the reason explained. Seven new and improved houses were erected in the village during the year.

The natives were taught to wash clothes and to scrub. Sand was used in the cleaning of floors; but the natives labored under difficulties, as there was a shortage of soap at the store. The only soap obtainable was tar soap, at 15 cents a bar. It was surprising how they kept so clean with this handicap. The Ivory soap provided for school use was kept for bathing the babies.

The natives were instructed to dispose of garbage at a common dumping ground. Considerable interest was aroused in cleaning yards, and instruction was given in draining yards by ditches to dispose of surface water. Seeds were distributed as a reward for clean grounds and encouraging the work. The school grounds were cleaned by teachers and pupils as an example. The sanitary conditions in the village are generally improved.

ANNUAL REPORT OF THE UNITED STATES PUBLIC SCHOOL AT KLAWOCK, IN SOUTHEASTERN ALASKA.

By Miss EDITH Z. MERCER, teacher.

General conditions.—This has been a successful year for the natives at Klawock. Financially they have prospered. Destitution has been unknown. Although their summer earnings were sufficient to afford a comfortable living for themselves and their families throughout the winter, the men have worked most of the time, except during the holiday season. Quite a number of families are realizing the value of money and are trying to save some each year. As a result of the influence and example of the missionaries here, and of the efforts of former teachers, the native huts are being replaced by large, well-built, and well-ventilated houses. There are no more communal houses in this village. The newly built houses are mostly two stories, and are well painted inside and out. Five new houses have been completed this spring. The natives have built their own houses and made most of the furnishings themselves. They make shelves, cupboards with drawers, tables, and other essentials for household equipment. Nearly every family has its own gasoline launch, made by the owners themselves.

Manual training.—The boys in school show considerable skill in the use of manual training tools. They enjoy the work thoroughly. This year they made miniature oars, boats and canoes, boxes, and a round dining-room table for the teacher's cottage. The table is a neat and creditable piece of work. Whatever they make in school they usually reproduce for their home use.

Sewing.—Great interest has been manifested in the sewing lessons. The girls are always anxious for sewing day. They show remarkable skill with a needle, and even excel white children in this work. The girls made dresses, handkerchiefs, skirts, aprons, pillow tops, and stand covers. Almost every woman has a sewing machine and sews for herself and her family. The young women often come to us with linen etc., and ask to be taught embroidery, drawn work, or whatever fancy work they see us doing. We thought it a good plan to start a sewing circle for all women who were interested in this line of work.

Village conditions.—In every home there is evidence of thrift. The women do very well at keeping house. Every housewife in Klawock knows how to clean her dwelling

and there are few houses that do not show an effort at cleanliness and neatness. The floors are scrubbed at least once a week in most of the homes. In many of the houses there is a regular cleaning in the spring. Since spring has come a number of the natives have cleaned their dooryards. Some have turned them into gardens and planted vegetables and strawberry plants; others have made flower beds and planted flower seeds. They have been taught to keep all garbage out of their dooryards, and are learning to burn refuse or carry it to the beach to be washed away with the tide.

EXTRACTS FROM THE REPORT OF MISS ISABELLE S. THURSBY, INDUSTRIAL TEACHER AT DOUGLAS, IN SOUTHEASTERN ALASKA.

The Indians of Alaska are a hardy and industrious race, suffering only from a too sudden contact with civilization, from their inability to adjust themselves altogether to our civilization on short notice, without help. We hear now and then of importing hardy Scandinavians to people Alaska, but we have in the natives of Alaska a people just as hardy as the Scandinavians, and with a little care and teaching they will be as healthy under the new conditions. All we need to do or can do for them is to help them bridge the chasm from barbarism to civilization. The task could almost be accomplished in a generation if intelligently attempted with sufficient funds, and it is a task which should appeal to the sense of justice and the generous impulses of the people of the Nation.

One reason why the Indian had so large a part in the early history of Alaska was the scarcity of white men. Now, however, the demand for labor is no longer so great, and it is the native laborer who has suffered most from the competition. For instance, until two or three years ago the demand for laborers at the great Treadwell mine at Douglas exceeded the supply. Employment was given to nearly every able-bodied Indian who applied. Indeed, a few years ago, it was no unusual thing for the superintendent of the mine to go through the village, begging for workers. At the same time, there was employment for every white man who could be secured. But more and more workmen came from the States, since there was always employment at comparatively good wages, and at present, out of 2,000 employees, only 5 are natives. More or less, the condition here indicated obtains all over southeastern Alaska, preference in employment as a general rule, except at some of the canneries, being given to members of the white race; and in southeastern Alaska, as a general rule, the supply of the latter equals, where it does not exceed, the demand.

The preference for white labor is by no means a matter of sentiment. The white race has for generations known the relation of master and servant. The working class has learned the knack of persistent toil, and the workers have become inured to the monotony of employment brought about by the division of labor. Not so with the Indian. Fully as industrious as the white man, he insists upon variety in his employment; he has not yet learned that fear of losing his job which enables the employer to count with a greater or less degree of certainty upon the steadiness of the white worker.

For these reasons the necessity for emphasizing that instruction which will help the native earn his own living becomes more and more obvious. The best and greatest work of the bureau, I think, is done at Hydaburg, where self-sustaining industries owned by the natives are established, and at Klukwan, where the natives are encouraged to cultivate the soil. This last is especially to be commended in a country where such farming as can be done meets with little competition and is exceedingly profitable.

The best part of the Hydaburg-Klukwan plan is that it is a feasible method of drawing the Indians together in larger communities, where it will be possible for the bureau to do the most for them.

To overlook, in the scheme of development for the Alaska Indian, his necessity for new amusements is to be impractical. Few rational and wholesome civilized amuse-

ments are now open to the Indian, and largely for this reason the potlatch still flourishes. In Juneau last winter there were no less than 30 potlatches. In southeastern Alaska these functions frequently cost as much as \$1,000 each; local merchants estimate that not one of those given in Juneau last winter cost the host less than \$500, or the earnings of one man for the whole summer. Furthermore, the cost in money is not the only evil of these "parties." Dr. Mahone regards the gluttonous feasts which accompany them as the most serious hygienic error in the lives of the natives. The schools are at a standstill for days after a celebration, and usually another potlatch is given before they have recovered from the last.

Hitherto we have tried to take the natives from their old forms of amusements without offering them any new ones. We have expected a lively and fun-loving people to become suddenly serious and console themselves with piety, and we have failed. To the degree we have succeeded in persuading them to abandon their old and vicious amusements, they have taken up new ones hardly less vicious, the most important being drink.

We should devise a system of institutional amusements in a few of the communities to which we desire to draw the natives.

What I wish to emphasize in this report more than anything else is the necessity for encouraging the native in the continuance and improvement of purely native industries in which they do not compete with white laborers. There is much in the Alaska Indian arts and crafts well worth preserving from the artistic as well as the commercial point of view. The demand for Alaska Indian baskets is now greater than the supply. If this industry were properly directed and protected and some assistance given in locating a market the natives would find it nearly as profitable as their work with nets and boats; more profitable probably than their hunting has been for several years. Their genius for weaving is remarkable, and their natural ability for working in wood, metal, and leather is very great. Their market for mats and other products could easily be made a great deal larger, and they could be easily taught to make articles of wood and leather which would find a ready sale. While their carving has so far been limited to totems and charms, their ability to carve has many possibilities, and this faculty should be turned from the manufacture of souvenirs and trinkets toward the production of articles useful yet distinctly Indian in method of workmanship, of which the cedar chest is merely the first which suggests itself. So far the articles of silver and copper sold as Indian are so produced as to take advantage of the Indian rather than to help him and afford him the least possible amount of work and profit. The articles are often manufactured in the east and shipped here for finishing by the Indians. They ought to be manufactured here; then the Indian would receive the substantial profit.

The possibilities for leather work are no less than for work in wood and metal. Apparently the only thing that the Indian has been taught to make particularly for the white man's market is the atrocious hair-seal pocket. He could be taught to make handsome and useful things of dressed and tooled leather—pocketbooks, sofa pillows, launch cushions, and innumerable other articles, useful as well as artistic. Deer skin, which now largely goes to waste, could be utilized for this purpose. In this case it would be necessary for the Government to lift the embargo now placed on the deerskin and the products of the deerskin in so far as they are produced by Indians only.

There is an excellent opportunity for a craft center in southeastern Alaska the work of which could become as famous as that of Deerfield or East Aurora, with the Indian arts as a basis. This work would not compete with that of the white laborers. Development of the really Indian arts and crafts can, however, only be successful if carefully planned and directed by some one who understands industrial education and the general subject of arts and crafts, together with the problem of marketing.

SECTION II.—REPORTS BY PHYSICIANS.

REPORT ON HEALTH CONDITIONS AMONG THE NATIVES OF ALASKA.

By DR. EMIL KRULISH, U. S. Public Health Service.

My detail in the Territory has enabled me to inspect the settlements of the Indians on the southeastern coast and upper Yukon River; of the Aleuts along the southwestern coast and in the vicinity of Cook Inlet; and of the Eskimos on the lower Yukon and on the coast of Bering Sea.

In my inspection I endeavored to examine as many natives as possible, and in these examinations special effort was made to determine the number suffering with tuberculosis, trachoma, and venereal diseases. In addition, I made a personal study of the sanitary conditions in the villages, and interviewed physicians and other persons who possessed any knowledge of the conditions that I was interested in.

DISEASES.

Sanitary conditions and the prevalence of disease vary somewhat in different sections of Alaska; syphilis is most prevalent in the southwest, eye diseases in the southeast, while pulmonary tuberculosis I believe to be most common among the Eskimos.

I found the following conditions and diseases present in the native population: Trachoma, keratitis, cataracts, blepharitis, conjunctivitis, corneal opacities, blindness, heart disease, stomach troubles, adenoids, tonsillitis, hysteria, paralysis, locomotor ataxia, pneumonia, pleurisy, tuberculosis, scabies, impetigo, syphilis, scrofula, rickets, rheumatism, epilepsy, ptomaine poisoning, and gonorrhea. Erysipelas, smallpox, measles, and infantile paralysis have occurred in epidemics.

Eye diseases.—Eye diseases are most common in the southeast. About 23 per cent of the natives in this section show evidence of eye trouble, while the Eskimos, the least afflicted, only 6 per cent.

Trachoma is a chronic disease of the eyelids, very contagious, and if neglected causes much suffering and may result in blindness. This disease is most common in the southwest (13 per cent). Trachoma is classified as a dangerous contagious disease by the United States Public Health Service, and immigrants having this trouble are not permitted to enter the United States.

I believe that 80 per cent of the blindness and partial loss of vision among the Alaska natives could have been prevented if these cases had received proper treatment in the early stage of the disease.

All cases of trachoma should be removed to hospitals for treatment, for while at large they are a menace to the community. The eye being a delicate organ, all treatment of eyes should be performed only by physicians and experienced trained nurses, as much harm may result from interference by inexperienced persons.

Syphilis.—It is rather difficult to determine accurately the number of natives having syphilis, for the symptoms of this disease are not always manifested externally, even when present within the system. A large percentage of blindness and corneal opacities are due to the inherited type of this disease.

In my opinion, the only practical method for treating syphilis in the natives is in hospitals, by the intravenous injection of Salvarsan (606). This treatment has been tried and has given wonderful results. Unfortunately, in southwestern Alaska, where this disease is most common, this treatment can not be administered, because no hospitals are available.

Tuberculosis.—Tuberculosis is the principal disease, and if not eradicated in the near future will exterminate the native population of Alaska in the course of 60 to 70 years. All forms of tuberculosis (pulmonary, osseous, glandular) are present.

The percentages of tuberculosis and the type of disease vary in different parts of the Territory. The pulmonary form is most common among the Eskimos, while tuberculosis of bones is most prevalent along the southern coast. I have seen a number of cases of spinal tuberculosis followed by paralysis, which condition could have been prevented by proper and timely treatment.

I am of the opinion that 15 per cent of the native population is infected with tuberculosis, including all forms and both the active and latent type, while in 7 per cent it is present in the active stages.

The home conditions are responsible for this infection, for in the crowded, unventilated rooms all eat from the same dish, drink from the same teapot spout, use the same towel, and expectorate on the floor. It is there that the principal danger of contagion exists, and it is there that tuberculosis, trachoma, and syphilis are most frequently contracted.

VITAL STATISTICS.

According to the United States census of 1900 the native population of Alaska was 29,536. In 1910 it was only 25,331, a decrease of 4,205, or 14.5 per cent.

Dr. M. H. Foster, in a report to the Commissioner of Education, dated August 11, 1911, states that at Sitka, where presumably accurate records of births and deaths have been kept by the churches, for a period of 5 years and 7 months the annual birth rate has been 72.3 per 1,000 and the annual death rate 85.4 per 1,000, showing a decrease in population of 13 per 1,000. During the year 1912 the birth rate was 24 and the death rate 29.3 per 1,000, a decrease of only 5.3 per 1,000.

This improvement in the Sitka village, which is an example of the improvement in other sections of Alaska, I attribute chiefly to the influence and efforts of physicians, nurses, teachers, and hospitals now under the Bureau of Education. It demonstrates the fact that the outlook for the general improvement of the native is encouraging and the task feasible. Give the native a white man's chance and I am positive that he will respond equally as well.

RECOMMENDATIONS.

Medical relief for the native is necessary and urgent. The tubercular, syphilitic, and trachomatous should be removed to properly equipped hospitals for treatment. Trained nurses should be employed for field work. A nurse should remain in a village for a sufficient period to treat and cure the minor ailments, discharging ears, infected sores, and inflamed eyes. A portion of her time should be devoted to education—teaching mothers the proper care and feeding of infants, preparation of food, cleanliness in the homes, the necessity of ventilation, the proper collection and disposal of tubercular sputum, etc. This work is just as important and necessary as that performed in hospitals.

PRESENT MEDICAL SERVICE.

The present medical service in Alaska is entirely inadequate to the demand. At present there is no appropriation available for the erection of hospitals, although these institutions are necessary for the proper treatment of the cases. The physicians who are now employed are working at a disadvantage in buildings which are unsuited for the treatment of sick; but even with this equipment good results are being accomplished. The present medical work should therefore be extended and placed upon a firm and permanent basis.

HOSPITALS.

The solution of the medical problem in Alaska is, therefore, the establishment of well-equipped hospitals, the employment of physicians and nurses, the isolation of the infected, and the education of the native in hygiene and sanitation.

The area of the Territory of Alaska is one-fifth of that of the United States, and transportation facilities are inadequate and expensive; the erection of one central hospital is therefore impracticable. I recommend, therefore, that a chain of small hospitals be established along the coast and on the Yukon River at points most convenient to the greatest number of natives. The sick can then be sent to the nearest hospital at little expense. In my estimate I have indicated the points which to my mind would serve the greatest number of people at the least expense.

As a part of these hospitals, the erection of fair living quarters for the physicians and nurses, with as many of the comforts and conveniences as possible, is as essential as the accommodations for patients. Many of these places are isolated, the treatment of the native is not always pleasant, and the persons engaged in this work should receive encouragement and consideration. There is no inducement for competent and reliable persons to enter this service if they are to be underpaid, or if they are to be without comfortable living quarters and compelled to work without the necessary appliances, drugs, and assistants.

Such hospitals may be utilized also for training native girls in nursing. As an experiment I consider it worth the trial to detail suitable girls to these institutions for this purpose.

EXPENSES.

The estimate of the appropriation required for the erection, equipment, and maintenance of these hospitals, for salaries of physicians, nurses, and attendants, traveling expenses, drugs, and supplies for the first year is \$274,600; the cost of maintaining this service in the future, after the buildings have been provided, would be approximately \$160,000.

It is very important to meet this medical problem in Alaska immediately, earnestly, and on a permanent basis, while the percentage of contagion and cost of the work are comparatively low and within control; otherwise, the situation may become more serious and even equal that of the Indians of the State of Oklahoma, of whom 50 per cent have recently been found to have trachoma.

An appropriation of at least \$125,000 is required in order to begin this work with an efficient organization. With this amount the hospitals which are now operated may be improved and continued, two new hospitals may be erected at places where most required, and the entire field may be supplied with physicians, nurses, and drugs.

CONCLUSION.

The native of Alaska, like the Indian of the States, is being gradually deprived of his natural means of support; each succeeding year the old native finds it more difficult to provide for himself. The Government has recognized this fact, and by providing schools and establishing reindeer herds is endeavoring to assist the coming generation to cope with the new situation.

With the advent of the white man into the Territory the native has contracted his diseases, with the result that tuberculosis and venereal and eye diseases are degenerating and depopulating the race. "Health is better than wealth" applies to the native as it does to the whites. Of what value are schools if the pupils they educate may not live to benefit by the education?

It is bad economy for the Government to maintain schools without hospitals. The native of Alaska is as much in need of medical treatment as he is of education; these are inseparable, and both are essential factors to his welfare. Cure him of his ills, teach him to live properly and under sanitary conditions, and he will profit by the education received in schools, become a worthy citizen, and continue to be self-supporting.

REPORT OF THE UNITED STATES HOSPITAL FOR NATIVES AT JUNEAU.

By DR. P. J. MAHONE, physician in charge.

Although very short of equipment and funds, we have really done remarkably well during the year ending June 30, 1912. We have treated 620 cases, including both hospital and out-patients, representing about 1,800 actual treatments or prescriptions, with a long range of ailments.

The greatest number of treatments were for arthritis, including both acute and chronic cases. This is the natural result of the damp, rainy climate and the native's way of living. Pulmonary tuberculosis is the next highest, being a trifle over 7 per cent of the total cases. All tubercular cases make about $9\frac{1}{2}$ per cent of the total. A great deal has been said of the prevalence of tuberculosis among Alaskan natives, and reports have been made giving the percentage of tubercular individuals to the total population as ranging all the way from 10 per cent to 45 or 50 per cent. I think these high per cents erroneous. Undoubtedly one cause of this error is the number of pulmonary hemorrhages. I have seen here and at other villages natives who gave histories of more or less serious hemorrhage, apparently from the lungs, with a subsequent recovery and lack of physical signs in the lungs such as one would expect to find in cases of tuberculosis with hemorrhage. It is my opinion that many of these hemorrhage cases are syphilitic.

Alaska natives are the best syphilitic patients that have so far come under my observation, not excepting Japanese. Their response to antisymphilitic medication is prompt and sure, in fact, in many cases almost phenomenal. They seem to have a natural tendency to throw off the disease, so that often results are obtained by a few days' or a month's treatment which would require many months' or a year's treatment in white patients.

We have had few cases of trachoma, not that there are so few in the district, but because they have not applied to the hospital for treatment. Trachoma seems to run a very mild course with these people, and, it seems to me, is not so contagious as in white people. Besides, treatment to accomplish lasting results must be continued over a long, tedious period, and patients rarely come for relief except in cases of imminent blindness, or where the individual is possessed of unusual intelligence.

A good many of the house cases have been surgical, and in major operations I have often found it necessary to call in other physicians to assist, because our corps of assistants was not adequate. However, with two trained nurses on the staff all the time, we can manage to do almost any sort of operation.

Two of our most interesting cases were skin grafting—one for tubercular skin ulcers and the other for covering an area denuded by a burn. Both cases healed beautifully.

During the year we have performed 16 uterine curettements, most of which have also required perineal or cervical repairing; 4 laparotomies; 3 excisions of hemorrhoids; 4 excisions of cataracts; 2 excisions of testicle (tubercular:); 4 excisions of tubercular glands in neck; 3 operations for tubercular bone disease; and 6 excisions of tonsils and adenoids, besides a great number of incisions of abscesses, curetting ulcers, and sewing up recent wounds.

I recommend that the building at present used for the native hospital at Juneau be purchased and a heating plant installed; the establishment of a small hospital, with a nurse in charge, on the west coast of Prince of Wales Island; the appointment of a physician whose duty it shall be to travel over the southeastern district; and the appointment of an additional nurse to travel from village to village, spending such time in each as may be required by conditions there.

REPORT OF DR. BRUCE H. BROWN, PHYSICIAN IN THE LOWER YUKON DISTRICT.

In the summer of 1911 I visited the native villages of Piamute, Holy Cross, Anvik, and Shageluk. By comparing my notes with those taken in 1910, I could see a decrease in the infant mortality rate, also in the number of cases of chronic illness, but an alarming increase in the number of cases of tuberculosis of the throat. This is a disease that I do not think it possible to treat successfully without a hospital. Hygienic conditions were slightly better in these villages. I called on the people, treated the sick, talked to them in their houses on sanitation, and repeated my public lecture of the previous year.

The most prevalent diseases were tuberculosis, rheumatism, lues, trachoma, iritis, and cholera infantum.

On my return to Russian Mission I took a small boat and floating down the Yukon called at the villages between Russian Mission and the mouth of the river. The natives below Russian Mission live in a much more filthy manner than those above, and, strange to say, have less disease and a lower death rate. I found a number of cases that might have been saved if they could have been removed to hygienic surroundings and if proper food and medicine had been insisted upon.

In the villages below Russian Mission the most prevailing disease on this trip was a peculiar form of blood poisoning, death resulting from some slight abrasion, in spite of deep incision and drainage. I saved only one of these cases, that of the chief reindeer herder at Mount Village, whom Mr. Cochran sent up to Russian Mission, where I could keep him in the schoolroom under constant observation. Under the microscope in these cases I found a mixed variety of bacteria, mainly of the streptococcic and staphylococcic families, but it is my belief that some other organism, transmitted by fish, has a great deal to do with the infection. There were a number of tubercular cases, some eye and ear diseases, but very little venereal infection.

In the winter I repeated my trip to the villages above Russian Mission, in addition calling at Holy Cross. I found about the same conditions as in the summer, no bowel troubles, but a few cases of pneumonia. I also made a sled journey to the Kuskokwim, calling at the tundra village Akiak and at villages between Akiak and Bethel. There was not so much sickness on the Kuskokwim; the hygienic conditions were no better and the food supply not as good as on the Yukon. This can be explained by the fact of a later and less intimate contact with whites.

In the native village in which I reside I can see improvement in almost every direction. The infant mortality rate is still very high, and through close intermarriage and inherited weaknesses it will take time to overcome it. The mothers have shown an interest in learning better ways, but the old customs can be replaced only in the course of time and by the exercise of patience. I lost two cases of tuberculosis of the throat in this village, one of them being my interpreter.

About two months ago a man was hauled in here from Quinhagak, at the mouth of Kuskokwim. He was a Malemute, so these people refused to assist him. I had to take him into the schoolroom, keep him at my own expense, and without assistance cut his leg off, while he lay flat on the floor. He is now walking on a wooden leg, the first time he has walked in four years. I can not think that the United States Government expects a physician employed by it to do work under such adverse conditions.

I have only one suggestion to make, and that is the immediate erection of hospitals. If that can not be done, turn the schools into hospitals, because under present conditions it will not be long before there will not be any children to educate. Appoint physicians as health officers, so that they will have power to enforce sanitation, and insist on obedience in the hospitals as well as in all things conducive to the physical and moral welfare of these people. Give a man a chance to do things; then hold him responsible for results. There has been so much delay that it will be a fight, even under favorable conditions, to prevent the extinction of a remarkable race of people.

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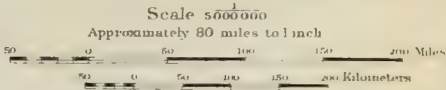
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DEPARTMENT OF THE INTERIOR
U. S. BUREAU OF EDUCATION
P. P. CLAXTON, COMMISSIONER

MAP OF ALASKA

Compiled from maps of the U. S. Geological Survey



1912

LEGEND

- Public Schools for natives of Alaska
- ▲ Reindeer Stations



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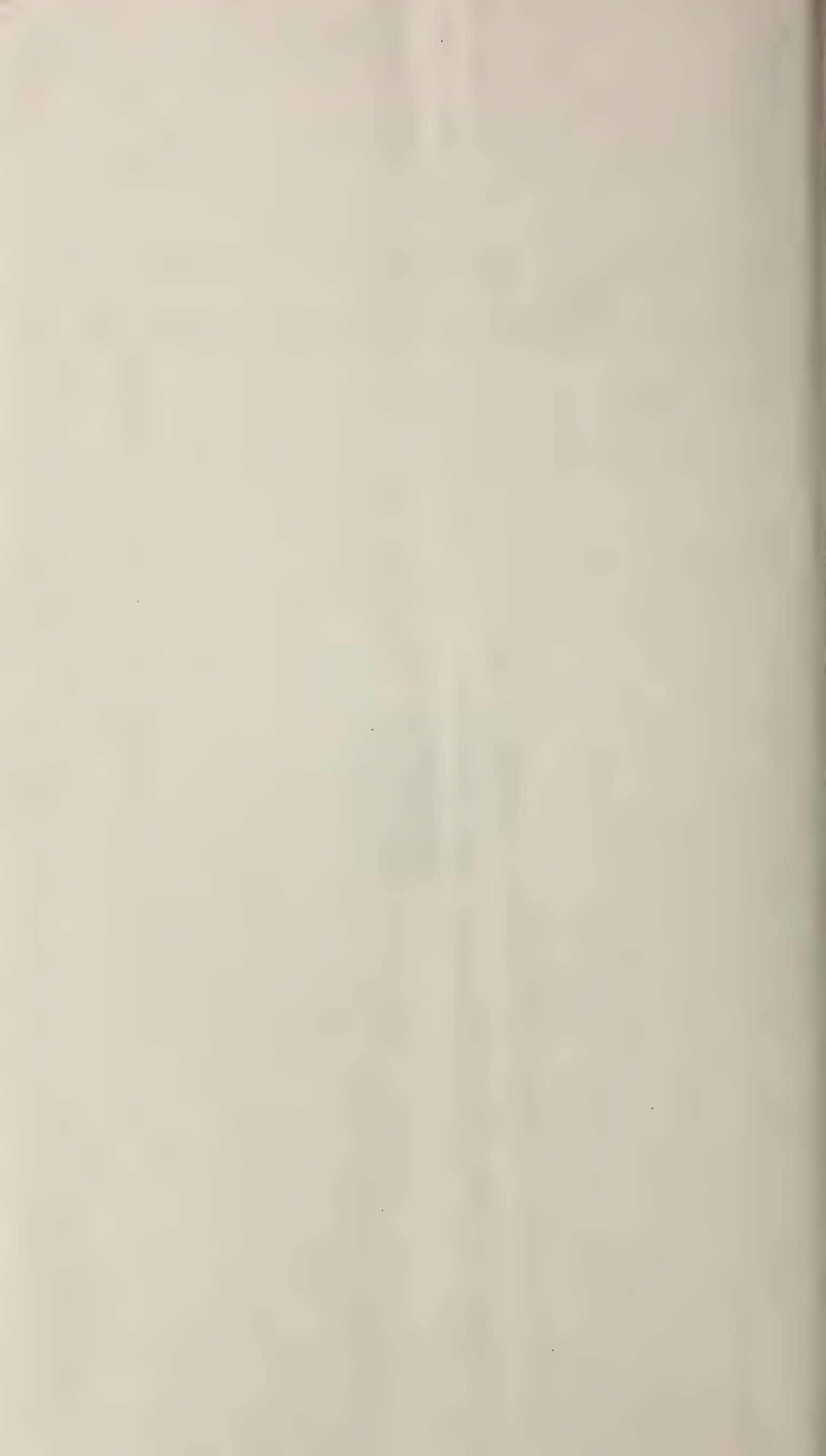
MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

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OCTOBER, 1913



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1913



MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

CONTENTS.—Introductory notes.—Educational history and biography.—Current educational conditions.—Pedagogics and didactics.—Educational psychology, Child study.—Special methods of instruction.—Special subjects of curriculum.—Kindergarten and primary school.—Rural education.—Secondary education.—Teachers: Training and professional status.—Higher education.—School administration.—School management.—School architecture.—School hygiene and sanitation.—Sex hygiene.—Physical training.—Social aspects of education.—Child welfare.—Moral and religious education.—Manual and vocational training.—Agricultural education.—Professional education.—Education of women.—Negro education.—Libraries and reading.—Bureau of education: Recent publications.—Periodicals indexed in this number.

INTRODUCTORY NOTES.

The following books and articles listed in the present bulletin may be designated as of special interest, the numbers in parentheses referring to the numbers of the full entries in this document:

New York state education building, Proceedings of the dedication (1296); Winch, *Inductive versus deductive methods of teaching* (1298); Edison *versus* Euclid (1305); Educational resources of village and rural communities, ed. by J. K. Hart (1327); E. C. Moore, *Indispensable requirements in city school administration* (1350); W. D. Hyde, *Quest of the best* (1376); E. G. Cooley, *Answer to Professor Dewey's article "An undemocratic proposal"* (1380); S. S. Green, *Public library movement in the United States* (1404).

The publications mentioned in this record may ordinarily be obtained from their respective publishers, either directly or through a dealer, but not from this office, except in the case of Bureau of Education publications.

Books, pamphlets, etc., intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

BOOKS, PAMPHLETS, PERIODICAL ARTICLES.

EDUCATIONAL HISTORY AND BIOGRAPHY.

1284. **Dominicis, Saverio de.** *La scienza comparata dell' educazione. Storia della pedagogia.* Milan, G. Damiano, 1913. 688 p. illus. 8°.
1285. **Sakmann, Paul.** *Jean-Jacques Rousseau.* Berlin, Reuther & Reichard, 1913. 198 p. 8°. (Die grossen erzieher, hrsg. von R. Lehmann. V. band)
1286. **Williams, John Sharp.** *Jefferson's influence on our educational institutions. In his Thomas Jefferson: his permanent influence on American institutions.* New York, Columbia university press, 1913. p. 266-307. (Columbia university lectures)

CURRENT EDUCATIONAL CONDITIONS.

1287. **Chancellor, William E.** The Salt Lake city meeting. School journal, 80: 322-27, 331, September 1913.
1288. **Crow, Carl.** What about the Filipinos? World's work, 26 : 516-28, September 1913.
Shows what American system of education has accomplished. Illustrated.
1289. **Estournelles de Constant, Paul Henri Benjamin, baron d'.** Les États-unis d'Amérique. Paris, A. Colin, 1913. ix, 536 p. 12°.
Chapter XIII, La poussée idéaliste, contains interesting observations on the educational institutions, and the children, of the United States.
"The author . . . has studied our life and our institutions under the most favorable conditions, and collected a great mass of observations, which he has interpreted with sympathy and discriminating judgment. His new book offers a happy combination of *impressions de voyage* and philosophical reflections."—Dial, July 16, 1913, p. 38.
1290. **Hendrick, Burton J.** Children of the steel kings. McClure's magazine, 41 : 61-69, September 1913.
A description of the school system of Gary, Indiana.
1291. **Martin, John.** School progress in New York city. National municipal review, 2 : 392-400, July 1913.
"Mr. Martin is a member of the Board of education of New York city, and some years ago was associated with the school system of London."
1292. **Martin, W. H.** The Salt Lake meeting. Missouri school journal, 30 : 389-92, September 1913.
A brief sketch of the National education association meeting at Salt Lake city, July 1913.
1293. **Romanné-James, C.** The Siamese at school. World's work (London) 22 : 311-17, August 1913.
The new era in Siam. Work of King's college and other schools. Future of the Siamese student.

PEDAGOGICS AND DIDACTICS.

1294. **Cousinet, Roger.** Méthodologie pédagogique. Éducateur moderne, 8 : 289-96, July 1913.
An introduction to a series of articles on modern educational methods.
1295. **Hoole, Charles.** A new discovery of the old art of teaching school. Copied from ms. in the British library, with introduction and notes by Thiselton Mark. Syracuse, N. Y., C. W. Bardeen, 1913. xxxviii, 360 p. 4°.
1296. **New York (State) Education department.** Proceedings of the dedication of the New York state education building, Albany, October 15, 16, 17, 1912. Albany, New York state education department, 1913. 247 p. illus. 4°.
(Ninth annual report—Supplemental volume).
Contains: 1. Whitelaw Reid: Chancellor's address, p. 17-24. 2. J. C. Schwab: The library in its relation to education and social service, p. 24-37. 3. H. F. Osborn: The state museum and state progress, p. 37-54. 4. W. H. Maxwell: The development of elementary schools in the state of New York, p. 59-72. 5. W. J. S. Bryan: The evolution of the public high school, p. 73-87. 6. C. R. Van Hise: Carrying knowledge to the people, p. 91-108. 7. W. S. Myers: The private schools; their place in American life, p. 108-118. 8. N. M. Butler: The aim of the modern university, p. 122-30. 9. H. S. Pritchett: Preparation for the professions, p. 130-38. 10. H. H. Henson: The value of historical studies to the higher learning, p. 139-46. 11. A. S. Draper: Dedicatory address, p. 199-206.
1297. **Radosavljevich, P. R.** Efficiency in learning. Scientific American. 109 179-80, September 6, 1913.
Practical results of experimental pedagogy. Discusses saving the energy of the teacher and pupil; influence of age, etc. Illustrated.

298. **Winch, William H.** Inductive *versus* deductive methods of teaching: an experimental research. Baltimore, Warwick & York, inc., 1913. 146 p. 12°. (Educational psychology monographs, ed. by G. M. Whipple, no. 11.)

EDUCATIONAL PSYCHOLOGY, CHILD STUDY.

1299. **Beik, Arthur K.** Physiological age and school entrance. Pedagogical seminary, 20 : 277-321, September 1913.
Thesis (Ph. D.) Also separately reprinted.
Bibliography: p. 316-21.
1300. **Burnham, William H.** Orderly association as a condition of mental health. Pedagogical seminary, 20 : 360-90, September 1913.
Bibliography: p. 389-90.
1301. **Meumann, Ernst.** The psychology of learning; an experimental investigation of the economy and technique of memory. Tr. from the 3d ed. of "The economy and technique of learning," by J. W. Baird. New York, London, D. Appleton and company [1913] xix, 393 p. 8°.
Bibliography: p. 378-84.
1302. **Phelps, C. L.** A study of errors in tests of adding ability. Elementary school teacher, 14 : 29-39, September 1913.
Based on data collected from the eighth grade of eight of the larger grammar schools of San Jose, California.
1303. **Thorndike, Edward L.** Eugenics: with special reference to intellect and character. Popular science monthly, 83: 125-38, August 1913.

SPECIAL METHODS OF INSTRUCTION.

1304. **Bailey, Carolyn Sherwin.** For the story teller: story telling and stories to tell. Springfield, Mass., Milton Bradley company, 1913. 261 p. 8°.
1305. Edison vs. Euclid. Has he invented a moving stairway to learning? A symposium with an introduction by W. D. Lane. Survey, 30 : 681-95, September 6, 1913.
Value of moving-picture exhibitions in education: historical, scientific, and sociological.
1306. **McAndrew, William.** An effective aid to education. World's work (London) 22 : 322-28, August 1913.
Magazine study as a remedy for textbook formalism, etc.

SPECIAL SUBJECTS OF CURRICULUM.

1307. **Abbott, Allan.** A high-school course in periodical literature. English journal, 2 : 422-27, September 1913.
1308. **Allen, Willis Boyd.** The passing of Greek? Nation, 97 : 207-8, September 4, 1913.
1309. **Church, H. O.** The use of scientific material in the high school course in English. School review, 21 : 461-66, September 1913.
Results obtained in J. Sterling Morton high school, Cicero, Ill. Gives list of study books.
1310. **Dorey, J. M.** Public speaking and dramatics in high schools. Education, 34 : 31-38, September 1913.
Recommends list of books.
1311. **Gathany, J. M.** Teaching practical politics in our schools. Education, 34 : 20-26, September 1913.
Shows necessity for such instruction. Says: "Our boys and girls are growing up in almost absolute ignorance of our political machinery and its working." Outlines a course of study.

1312. **Grupe, Mary A.** A review of the pedagogical studies in the teaching of spelling. *Education*, 34 : 1-19, September 1913.
Describes the different tests. Bibliography appended.
1313. **Harnack, Otto.** Über die grundlagen der aesthetik als wissenschaft. *Preussische jahrbücher*, 153 : 1-14, July 1913.
Scientific esthetics as a refuge from the mad whirl of the age.
1314. **Holtz, Frederick L.** Principles and methods of teaching geography. New York, The Macmillan company, 1913. 359 p. illus. 12°.
List of geographical books: p. 341-51.
"The book begins with the subject and method of home geography, and then proceeds with the discussion of the work of the higher grades in such a way as to indicate the growth of the subject in the pupil's mind."
1315. **Der kampf zwischen althumanistischer und modernhumanistischer bildung in Belgien.** *Zeitschrift für lateinlose höhere schulen*, 24 : 257-60, heft 8, 1913.
Discusses report of Belgian commissioner on classical and modern in Belgian secondary education.
1316. **McKittrick, May.** The adaptation of the work in English to the actual needs and interests of the pupils. *English journal*, 2 : 405-16, September 1913.
A paper read before the National council of teachers of English at Philadelphia, March 1, 1913.
1317. **Munro, William Bennett.** Instruction in municipal government in the universities and colleges of the United States. *National municipal review*, 2 : 427-38, July 1913.
A general account of the present status of municipal government as a course in American colleges, together with a statistical list of institutions offering instruction in the subject.
1318. **Pace, Edward A.** The teaching of philosophy in the college. *Catholic educational review*, 6 : 110-19, September 1913.
Read in the Philosophy section of the Catholic educational association at New Orleans, July 2, 1913.
1319. **Small, Elizabeth Bird.** The confessions of a grade teacher. *School-arts magazine*, 13 : 29-35, September 1913.
The "confessions" relate to experiences while teaching drawing, and the author emphasizes the fact that drawing teachers should give more attention to the grade teachers.
1320. **Suzzallo, Henry.** The teaching of spelling; a critical study of recent tendencies in method. With an introduction by F. M. McMurry. Boston, New York [etc.] Houghton Mifflin company [1913] xii, 129 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo.)
First published as vol. xii, no. 5 of *Teachers college record*, November 1911.
1321. **Turner, Thomas W.** Nature study in the public schools. *Southern workman*, 42 : 497-503, September 1913.
A paper read before the Maryland colored state teachers' association, dealing with the results which should follow adequate teaching of nature study.

KINDERGARTEN AND PRIMARY SCHOOL.

1322. **Carmichael, R. D.** The Montessori method. *Progressive teacher*, 19 : 11-13, September 1913.
First of a series of articles on the Montessori method.
1323. **Hailmann, W. N.** A few words of warning to coming kindergartners. *Kindergarten-primary magazine*, 26 : 2-3, September 1913.
A warning against pedantry and routine.
1324. **Hill, Patty S.** Some hopes and fears for the kindergarten of the future. *Kindergarten-primary magazine*, 26 : 4-10, September 1913.
Also in *Kindergarten review*, 24 : 9-21, September 1913.
An address read at International kindergarten union convention, Washington, D. C., in which the author expresses her faith in the kindergarten, but points out that to insure success in the future it will be necessary to employ new methods to meet the new conditions in social life and education.

1325. **Lynch, Ella F.** How can I educate my child at home? *Ladies' home journal*, 30 : 24, September 1913.
Second article in series. Education of a child from 5 to 10 years of age.
1326. **Rust, Anna C.** Economy in the kindergarten. *Education*, 34 : 46-50, September 1913.

RURAL EDUCATION.

1327. **Hart, Joseph K., ed.** Educational resources of village and rural communities. New York, The Macmillan company, 1913. 277 p. 12°.
- CONTENTS: 1. J. K. Hart: Introduction—The community as educator. 2. J. L. Coulter: Physical resources of the community. 3. J. K. Hart: Human resources of the community. 4. J. L. Coulter: Economic activities of the community. 5. Eugene Kelley: Community health, hygiene, and sanitation. 6. R. G. Thwaites: Local history of the community. 7. J. K. Hart: Political life of the community. 8. J. H. McFarland: Development of outdoor beautification in a community. 9. Anna R. Van Meter: Economy and beauty in the homes of the community. 10. J. K. Hart: General social life of the community. 11. M. T. Scudder: Recreation, play, and amusements in the community. 12. W. G. Beach: Moral and social deficiencies of the community. 13. C. C. Thurber: Religious life of the community. 14. Mary E. Downey: Intellectual life of the community. 15. H. W. Foght: Community life; curriculum of the community school. 16. G. W. Knorr: Community activity in the administration of education.
- First, each subject is represented in a general way as relating to any community. Second, in connection with each subject specific questions are propounded to be investigated for each local community. Third, a brief bibliography of each subject is presented.

SECONDARY EDUCATION.

1328. **Forsyth, L. A.** The high school of different nations. *North Carolina education*, 8 : 22-23, September 1913.
Brief sketch of secondary education in England, Germany, Austria, France, and Sweden.
1329. **Short, R. L.** The institutional high school and what it does for the community. *School review*, 21 : 475-77, September 1913.
Work accomplished by the West technical high school, of Cleveland, Ohio.
1330. **Stetson, Paul C.** The junior high school. *Vocational education*, 3 : 30-39, September 1913.
A discussion of the junior high school, with special reference to the school in Grand Rapids, Mich.
1331. **Taft, Horace D.** American boarding schools. *Churchman*, 108 : 211-12, 226, August 16, 1913.
The writer considers that the boarding school has an opportunity to raise the educational standards in America.
1332. **Wheatley, William A.** The reorganization of secondary education. *School journal*, 80 : 338-39, September 1913.
A brief description of the "national commission" for the reorganization of secondary education appointed under the direction of the National education association.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1333. **Blaine, Anita McC.** The founding of the School of education. *Elementary school teacher*, 14 : 11-19, September 1913.
To be continued. Purpose and work of the Francis W. Parker school, University of Chicago.
1334. **Cain, A. W.** Teaching as a business. *Philippine craftsman*, 2 : 45-53, July 1913.
A statement by the acting superintendent of the Philippine normal school, of the required qualifications and conditions of employment for teachers in the Philippines.
1335. **Osterman, W.** Zur reform des pädagogischen unterrichts an den lehrerseminaren. *Pädagogische blätter*, 42 : 325-40, heft 7, 1913.
Part of the controversy on the teaching of pedagogy in the teachers' seminaries.
1336. **Pearse, Carroll G.** For more adequate teachers' salaries. *Nebraska teacher*, 16 : 55-58, September 1913.

1337. **Ruediger, William C.** Teachers' supervisory councils. American school board journal, 47 : 9-10, 62, September 1913.
1338. **Shideler, Samuel E.** Qualifications, salary, and tenure of the teachers in the commissioned high schools of Indiana. School review, 21 : 446-60, September 1913.

Replies to a questionnaire. Reports received from 160 schools. Interesting tables of statistics.

HIGHER EDUCATION.

1339. **Asterisk, John.** The reorganization of the University of London. Educational review, 46 : 109-34, September 1913.
A critical review of a voluminous report recently issued on university education in London, by a Royal commission.
1340. **Colby, Elbridge.** Value of the college fraternity. Educational review, 46 : 157-67, September 1913.
Advocates college fraternities. Criticizes the distorted charges brought against fraternity life.
1341. **Craighead, Edwin B.** Functions and limitations of the governing board. Science, n. s. 38 : 319-26, September 5, 1913.
Deals with status of governing boards of universities.
1342. Doctorates conferred by American universities. Science, n. s. 38 : 259-67, August 22, 1913.
Contains interesting statistical tables, also a list of theses in the natural and exact sciences.
1343. **Lochner, Louis P.** Internationalism among universities. In Book of the fourth American peace congress, St. Louis, May 1, 2, 3, 1913. p. 197-207.
1344. **Lockwood, Francis Cummins.** The freshman and his college. A college manual. Boston, New York [etc.] D. C. Heath & co. [1913] 156 p. 12°. CONTENTS.—Introduction.—D. S. Jordan: The after-self.—W. D. Hyde: An address to freshmen.—William James: Habit.—F. C. Lockwood: How to study.—D. S. Jordan: Recent tendencies in college education.—C. W. Eliot: New definition of the cultivated man.—J. B. Johnson: Two kinds of education for engineers.—W. D. Hyde: A poisonous phrase.—Alexander Meiklejohn: An inaugural address.—J. G. Hibben: The philosophy of education.—W. W. Thoburn: New wine in old bottles.—J. H. Newman: Description of a gentleman.—Bibliography.
1345. **McVey, Frank L.** The matter of college entrance requirements. Popular science monthly, 83 : 286-93, September 1913.
Gives table showing admission units required in liberal arts colleges of State universities, etc.
1346. The next college president. By a near-professor. Popular science monthly, 83 : 265-85, September 1913.
Says that members of college faculties want at least "the opportunity of taking a more active part in the smaller as well as in the larger affairs of the college." Their work is too circumscribed.

SCHOOL ADMINISTRATION.

1347. **Brooks, E. C.** Seven, eight, and nine years in the elementary school. Elementary school teacher, 14 : 20-28, September 1913.
Gives programs of the grades, etc., one taken from New England, one from north of the Ohio, one west of the Mississippi, and one from the South Atlantic states.
1348. **Case and comment.** The lawyer's magazine. [Educational number] vol. 20, no. 4, September 1913. Rochester, N. Y., The Lawyers cooperative publishing company.
Contains: 1. B. B. Bassett: Jurisdiction of the teacher and the school board, p. 227-32. 2. J. A. Lapp: Industrial education, p. 233-36. 3. J. C. Boykin: Compulsory education, p. 237-38. 4. W. P. Borland: Study of law in relation to citizenship, p. 239. 5. L. L. Wright: Compulsory education plus compulsory health conditions, p. 240-42. 6. G. B. Cook: School districts under the Arkansas school law, p. 243-44. 7. W. A. Estrich: Religious teaching in the public schools, p. 249-51. 8. A. G. Shepard: Residence essential to entitle child to school privileges, p. 252-54. 9. J. H. Bush: Use of school buildings for other than school purposes, p. 255-58. 10. Alden Chester: Dr. Andrew Sloan Draper, an able lawyer and eminent educational administrator, p. 292-95.

1349. **Judson, Harry Pratt.** Economy in education. School review, 21 : 441-45, September 1913.

Read at the meeting of the Educational conference with secondary schools, Chicago, April 18, 1913.

The writer points out that the length of time spent in the schoolroom might be shortened by eliminating the duplication found in elementary schools, secondary schools, and colleges.

1350. **Moore, Ernest C.** Indispensable requirements in city school administration. Educational review, 46 : 143-56, September 1913.

Says that public education is "a state affair and not a local affair and a state affair it must remain." Quotes from Dr. Flexner as follows: "Every American city that has succeeded in improving its public school system has found it absolutely necessary to give that system quasi-independence; every American city that ties up its school system with the general municipal administration finds its school affairs inefficiently conducted."

1351. **Thurber, Charles H.** What about textbooks? Outlook, 105 : 81-84, September 13, 1913.

Praises the quality of textbooks used by public schools in the United States.

SCHOOL MANAGEMENT.

1352. **Leupp, Francis E.** The progressive ideal in school management. Scribner's magazine, 54 : 388-94, September 1913.

Discusses the problem of student self-government in a boarding school for girls.

SCHOOL ARCHITECTURE.

1353. **Ayres, May.** Fire protection in public schools. American school board journal, 47 : 11-13, September 1913.

1354. **Cooper, Frank Irving.** The planning of school houses against the fire hazard. American school board journal, 47 : 14-15, September 1913.

SCHOOL HYGIENE AND SANITATION.

1355. **Bruce, William C.** The fourth International school hygiene congress. American school board journal, 47 : 16-17, 56, September 1913.

An account of the recent meeting at Buffalo, N. Y., August 25-30, 1913.

1356. **Mulford, Henry J.** The foundation of education. New York medical journal, 98 : 457-62, September 6, 1913.

Says there should be no formal schooling for a child under seven years, but "the foundation of its education should be begun." Discusses physiology of brain, etc.

1357. **Sackett, L. W.** Health supervision in schools. Texas medical journal, 29 : 65-69, August 1913.

1358. **Schutte, F.** Das erholungsheim, ferienkurhaus, schülerheim, pädagogium. Zeitschrift für schulgesundheitspflege, 26 : 369-76, 436-44, nos. 6 and 7, 1913.

Continuation of series begun in 1912. These articles treat of *schülerheime* from the point of view of hygienic construction. Pictures and plans are given.

1359. **Toepel, Theodore.** The effect of school life on the physical child. American physical education review, 18 : 369-74, June 1913.

A paper read before the Public school physical training society, Newark, N. J., March 27, 1913, in which a few of the bad effects are noted and a few remedies suggested.

SEX HYGIENE.

1360. **Lyttleton, Edward.** Instruction in matters of sex. Educational review, 46 : 135-42, September 1913.

Author recognizes that "where society has allowed a state of things to grow up which has undermined much of the parental control as well as the desire to control, the only hope of saving swarms of children from woful wreckage is for the teachers to band together and take the place of the parents." Advocates the dynamic power of religion as an inspiration for teachers and parents.

1361. **Manny, Frank A.** Bibliography of sex hygiene. Educational review, 46 : 168-76, September 1913.
A course of reading for teachers.

PHYSICAL TRAINING.

1362. **Berry, Elmer.** International congress of physical education, Paris, France, March 17-20, 1913. American physical education review, 18 : 383-88, June 1913.
1363. **Kindervater, A. E.** Objects and aims of the Public school physical training society and suggestions for its future usefulness. American physical education review, 18 : 353-57, June 1913.
Read before Public school physical training society, Newark, N. J., March 27, 1913.
1364. **Pihkala, Lauri.** A foreigner's impressions of college athletics in America. American physical education review, 18 : 389-94, June 1913.
The author was sent to America by the Olympic committee of Finland to study the educational use of athletics. This article tells of his impressions of college athletics at the University of Pennsylvania.

SOCIAL ASPECTS OF EDUCATION.

1365. **Collier, John.** Social centers. National municipal review, 2 : 455-60, July 1913.
A review of E. J. Ward's book, The social center.
1366. **Rynearson, Edward.** Do the high schools need reconstruction for social ends? Religious education, 8 : 183-90, June 1913.
1367. **White, Frank M.** Ten millions for good works. World's work, 26 : 549-58, September 1913.
Educational and philanthropical activities of the Russell Sage foundation, New York city. Methods of influencing public opinion for better schools, playgrounds, etc.

CHILD WELFARE.

1368. The curfew as an effective means of getting boys and girls off the street at night. Pennsylvania school journal, 62 : 93-106, September 1913.
A discussion of the curfew with especial reference to its adoption in Lancaster, Pa.
1369. **Hutchinson, Woods.** Fair play for the child. Good housekeeping, 57 : 370-76, September 1913.
Shows effects of training in the open air.
1370. **Wooley, Helen Thompson.** Charting childhood in Cincinnati. Survey, 30 : 601-6, August 9, 1913.
"Accurate measurements of the effect of industry on children." Made in Cincinnati, Ohio. Writer declares it doubtful whether schools should undertake to place children under 16 in industry since "there is no work open to them worth advising them to take." Illustrated with graphic statistics.

MORAL AND RELIGIOUS EDUCATION.

1371. **Alexander, John L.** The boy and the Sunday school. A manual of principle and method for the work of the Sunday school with teen-age boys. New York, London, Association press, 1913. 284 p. 12°.
1372. ——— ed. The Sunday school and the teens. The report of the commission on adolescence authorized by the San Francisco convention of the International Sunday school association. A study of the adolescent in relationship to the home, church, Sunday school, and the community. New York, London, Association press, 1913. xxv, 416 p. 12°.

1373. **Claus, Henry T.** The problem of the college chapel. *Educational review*, 46 : 177-87, September 1913.
Answers to a questionnaire sent to sixty representative American colleges.
1374. **Fish, Carl Russell.** Shepherding the college student. *Churchman*, 108 : 311-12, September 6, 1913.
The author advocates the adoption of some plan by which the home churches and the universities may be so correlated that no Church student will be overlooked.
1375. **Hartshorne, Hugh.** Worship in the Sunday school; a study in the theory and practice of worship. New York city, Teachers college, Columbia university, 1913. 210 p. 12°.
The psychology of feeling is discussed in its relation to education, to worship, and to experience as a whole. Then follows a description of the method by which services can be planned and conducted in such a way as to accomplish the educational purposes of worship. Finally a method of securing evidence of the effects of such services on the pupils is proposed, and the results of an actual experiment in worship are presented.
1376. **Hyde, William DeWitt.** The quest of the best. Insights into ethics for parents, teachers and leaders of boys. New York, T. Y. Crowell company [1913] 267 p. 12°.
CONTENTS.—Introduction. 1. Natural badness the germ of goodness. 2. Artificial goodness the repression of badness. 3. The quest of the best. 4. Missing the best: sins of excess and defect. 5. The personal motive and the social medium. 6. The birthright of the child.
1377. **Luther, F. S.** Religion among college students. *Churchman*, 108 : 147-48, August 2, 1913.
The author believes that the influences exerted on the boy before entering college determine largely his religious life afterward, but does not belittle the responsibilities of the college in this respect.
1378. **Shahan, Thomas J.** The teaching office of the Catholic church. *Catholic educational review*, 6 : 97-109, September 1913.
Address delivered before the Catholic educational association at New Orleans, July 1, 1913.

MANUAL AND VOCATIONAL TRAINING.

1379. **Anderson, C. J.** A study of vocational needs in our present school system. *Wisconsin journal of education*, 45 : 185-88, September 1913.
An attempt made in Madison, Wis., "to find out the vocational desires of parents for their children and the vocational ambitions of the children for themselves."
1380. **Cooley, Edwin G.** Professor Dewey's criticism of the Chicago commercial club and its vocational education bill. *Vocational education*, 3 : 24-29, September 1913.
A defense of the club and its plans in answer to Professor Dewey's article "An undemocratic proposal" in the May issue of the same magazine.
1381. **Crawshaw, F. D.** College entrance and advanced credits for manual arts. *School review*, 21 : 467-74, September 1913.
Writer says that administrative officers "must encourage the election of vocational subjects by high school students who are preparing for college."
1382. **Davenport, Eugene.** Why vocations should be taught in our schools. *School news*, 27 : 4, September 1913.
To be continued.
1383. **Dean, Arthur D.** Training for appreciation and training for skill: partnership of art and manual training. *Craftsman*, 24 : 622-24, September 1913.
1384. **Edlmann, Edith.** Juvenile labour exchanges and apprenticeship bureaux in Germany. *Contemporary review*, 104 : 230-39, August 1913.
A discussion of vocational training and the remarkable results obtained. Cinematograph exhibitions to popularize handicraft were introduced into the elementary schools of Greater Berlin in May 1913.

1385. **Hoover, J. M.** An experiment in vocational education. *Business America*, 14 : 266-68, September 1913.
Describes the reorganization of Friends academy at Bloomingdale, Ind.
1386. **New Jersey. Department of public instruction.** State-aided vocational schools. Rules and regulations. Trenton, N. J., MacCrellish & Quigley, state printers, 1913. 46 p. 8°. (Bulletin no. 1—June 1913.)
1387. **Redfield, William.** A plea for practical education: excerpts from recent addresses. *Vocational education*, 3 : 1-10, September 1913.

AGRICULTURAL EDUCATION.

1388. **Hummel, William Granville and Hummel, Bertha Royce.** Materials and methods in high school agriculture. New York, The Macmillan company, 1913. 385 p. illus. 12°.

PROFESSIONAL EDUCATION.

1389. **American medical association. Council on medical education.** Medical education in the United States. Annual presentation of educational statistics for college session of 1912-13. Pages from the educational number of the *Journal of the American medical association*, August 23, 1913. Chicago, Ill., 1913. p. 569-603. 4°.
1390. **Hastings, T. W.** Reciprocal relations of the clinic and the laboratory in medicine. *Journal of the American medical association*, 61 : 651-55, August 30, 1913.
Discusses the influence of the laboratory on modern medical education.
1391. **Heuser, H. J.** Suggestions toward a uniform plan of studies in the department of theology for seminaries in the United States. *Ecclesiastical review*, 49 : 261-80, September 1913.
Recommendations for Catholic seminaries.
1392. [Medical education, etc.] *Lancet* (London) 185 : 607-706, August 30, 1913.
Entire number devoted to medical education and allied topics. Information regarding medical examining boards and schools of the United Kingdom; naval, military, and Indian medical service. Called the students' number.
1393. **Nixdorff, Natalie W.** The training of a professional nurse. *Ladies' home journal*, 30 : 30, September 1913.
1394. **Pratt, Frederick H.** Teacher and learner in medicine. *Journal of the American medical association*, 61 : 646-49, August 30, 1913.
Discusses the characteristics of good teaching. Dwells on "the lagging of medical teaching as compared with medical knowledge."

EDUCATION OF WOMEN.

1395. **Bennett, Charles A.** Impression gained from a day's visit to the Mississippi industrial institute and college. *Vocational education*, 3 : 11-23, September 1913.
Description of the first state college founded for women.
1396. **Cole, Samuel Valentine.** Women's education and the religious life. *Churchman*, 108 : 150-51, August 2, 1913.
The author emphasizes the relation between women's education and home making, and shows that the college in broadening the woman's horizon and presenting truth in its simplicity influences "the homes of this great land and therefore . . . the future of the nation's life."

1397. **Comstock, Sarah.** A master-mistress of education. *World's work*, 26 : 579-87, September 1913.

A life-sketch of Miss M. Carey Thomas, president of Bryn Mawr college, "whose guidance has developed one of the most efficient institutions for the higher education of women and a remarkable self-governing democracy of American girls."

1398. **Johnson, Ethel M.** Vocational work conducted by the Women's educational and industrial union, Boston. *Vocational education*, 3 : 40-49, September 1913.

1399. **Lee, Jennette.** To ———, coming to college. *Good housekeeping*, 57 : 316-22, September 1913.

By the professor of English at Smith college.

1400. **Needham, Mary Master.** Educating "nice girls." *Saturday evening post*, 186 : 24-25, 61-62, September 13, 1913.

1401. **Trine, Ralph Waldo.** The value of a college education. *Woman's home companion*, 40 : 13, 70, September 1913.

Writer believes that the college course should relate itself more closely to life, without being either too purely practical or too purely cultural.

NEGRO EDUCATION.

1402. **Sutton, William Seneca.** The education of the Southern negro. *School journal*, 80 : 332-37, September 1913.

Brief historical survey and "six principles, or planks, in the program" for negro education.

LIBRARIES AND READING.

1403. **Andrews, E. Benjamin.** Education through reading. *Popular science monthly*, 83 : 139-48, August 1913.

Writer recommends reading during scraps of time otherwise lost; urges that reading matter be carefully selected, and that note-taking thereon be systematically followed.

1404. **Green, Samuel Swett.** The public library movement in the United States, 1853-1893. From 1876, reminiscences of the writer. Boston, The Boston book company, 1913. 336 p. front. (port.) 8°.

1405. **Koch, Theodore W.** The British museum library. First paper: Organization and history. *Library journal*, 38 : 499-509, September 1913.

1406. Our public libraries. *Contemporary review*, 104 : 250-58, August 1913.

Describes the linking-up of the public libraries of Great Britain with the state and copyright libraries.

1407. **Wallace, J. A.** A plan for outside reading. *School review*, 21 : 478-85, September 1913.

"Direction of the whole reading of our pupils is becoming more and more desirable, that the limited and inadequate class work may bear proper fruit." Shows what has been done in Crosby high school, Waterbury, Conn.

BUREAU OF EDUCATION: RECENT PUBLICATIONS.

1408. An educational survey of a suburban and rural county—Montgomery county, Md. By H. N. Morse and E. Fred Eastman, Department of church and country life of the Board of home missions of the Presbyterian church, and A. C. Monahan, United States Bureau of education. Washington, 1913. 68 p. illus. (Bulletin, 1913, no. 32)

1409. Lists of references, prepared in the Library division, Bureau of education, on Economic value of education, Higher education, Home economics, Maria Montessori and her methods, Mothers' clubs and parent-teacher associations, Play and playgrounds, Rural life and culture, Secondary education in the United States. Revised to June, 1913. 8 leaflets, each 3 to 8 p.

PERIODICALS INDEXED IN THIS NUMBER.

- American physical education review, 93 Westford avenue, Springfield, Mass.
 American school board journal, 129 Michigan street, Milwaukee, Wis.
 Business America, 39 West Thirty-second street, New York, N. Y.
 Case and comment, Aqueduct building, Rochester, N. Y.
 Catholic educational review, Washington, D. C.
 Churchman, 434 Lafayette street, New York, N. Y.
 Contemporary review, London, England.
 Craftsman, 41 West Thirty-fourth street, New York, N. Y.
 Ecclesiastical review, Philadelphia, Pa.
 Educateur moderne, Paris, France.
 Education, 120 Boylston street, Boston, Mass.
 Educational review, Columbia university, New York, N. Y.
 Elementary school teacher, University of Chicago press, Chicago, Ill.
 English journal, University of Chicago press, Chicago, Ill.
 Good housekeeping, 381 Fourth avenue, New York, N. Y.
 Journal of the American medical association, 535 Dearborn avenue, Chicago, Ill.
 Kindergarten-primary magazine, Manistee, Mich.
 Kindergarten review, Milton Bradley co., Springfield, Mass.
 Ladies' home journal, Curtis publishing company, Philadelphia, Pa.
 Lancet, London, England.
 Library journal, 298 Broadway, New York, N. Y.
 McClure's magazine, Fourth avenue and Twentieth street, New York, N. Y.
 Missouri school journal, Jefferson City, Mo.
 Nation, Box 794, New York, N. Y.
 National municipal review, North American building, Philadelphia, Pa.
 Nebraska teacher, 1126-1128 Q street, Lincoln, Nebr.
 New York medical journal, New York, N. Y.
 North Carolina education, Raleigh, N. C.
 Outlook, 287 Fourth avenue, New York, N. Y.
 Pädagogische blätter, Gotha, Germany.
 Pedagogical seminary, Worcester, Mass.
 Pennsylvania school journal, Lancaster, Pa.
 Philippine craftsman, Manila, P. I.
 Popular science monthly, Substation 84, New York, N. Y.
 Preussische jahrbücher, Berlin, Germany.
 Progressive teacher, Nashville, Tenn.
 Religious education, 332 South Michigan avenue, Chicago, Ill.
 Saturday evening post, Curtis publishing company, Philadelphia, Pa.
 School-arts magazine, 120 Boylston street, Boston, Mass.
 School journal, 31-33 East Twenty-seventh street, New York, N. Y.
 School news and practical educator, Taylorville, Ill.
 School review, University of Chicago press, Chicago, Ill.
 Science, Substation 84, New York, N. Y.
 Scientific American, 361 Broadway, New York, N. Y.
 Scribner's magazine, 597 Fifth avenue, New York, N. Y.
 Southern workman, Hampton, Va.
 Survey, 105 East Twenty-second street, New York, N. Y.
 Texas medical journal, Austin, Tex.
 Vocational education, Manual arts press, Peoria, Ill.
 Wisconsin journal of education, Parker educational co., Madison, Wis.
 Women's home companion, 381 Fourth avenue, New York, N. Y.
 World's work, Doubleday, Page & co., Garden City, N. Y.
 World's work, London, England.
 Zeitschrift für lateinlose höhere schulen, Leipzig, Germany.
 Zeitschrift für schulgesundheitspflege, Leipzig, Germany.

REPORT OF
THE COMMITTEE OF THE NATIONAL
COUNCIL OF EDUCATION
ON
ECONOMY OF TIME IN
EDUCATION

JAMES H. BAKER
CHAIRMAN



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ECONOMY OF TIME IN EDUCATION.

INTRODUCTORY.

Your committee, appointed (as at present organized) at the Cleveland meeting in 1908 to investigate "Economy of Time in Education," submits its report.

A preliminary inquiry on "The contemporary judgment as to the culture element in education and the time that should be devoted to the combined school and college course," was authorized by the Council of Education of the National Education Association at the Boston meeting, 1903, and a committee was appointed. The brief recommendation of this committee was never acted upon by the council.

At the Los Angeles meeting in 1907 the original subject was revived and a resolution was passed authorizing the appointment of a committee to make a preliminary inquiry and report. The entire committee of five proposed by the resolution were not appointed, but the chairman of the council requested James H. Baker, the original mover of the investigation in 1903 and a member of the first committee, to make a preliminary report at the next meeting, 1908, on the need of such an investigation. A questionnaire was sent to a large number of presidents of universities, superintendents of schools, and principals of high schools, professors of education, sociologists, and business men. The report contained a review of the whole field of inquiry; an appendix with questions, summaries, and extracts; and a bibliography prepared by the National Bureau of Education. The full report was published in pamphlet form by the National Education Association for the use of the committee of investigation; the review and a condensed summary were printed in the 1908 *Proceedings* of the National Education Association.

The recommendation of the above report to the council, that a committee be appointed to make a full investigation, was adopted, 1908. The committee is as follows:

James H. Baker, president of the University of Colorado, chairman.

James H. Van Sickle, superintendent of schools, Springfield, Mass.

William H. Smiley, superintendent of schools, Denver, Colo.

Henry Suzzallo, professor of the philosophy of education, Teachers College, Columbia University.

Albion W. Small, professor of sociology, Chicago University.

In the division of the work it was agreed that the chairman should investigate especially the college and its relation to the other departments of the university and to the secondary schools; Supt. Van Sickle, elementary education; Supt. Smiley, secondary education; Prof. Suzzallo, the educational principles involved in the inquiry; Prof. Small, the sociological view. The committee made a brief report of progress in 1909, which was published in the Proceedings of that year. The chairman presented a view of the whole subject under the title of "Reorganization of American Education," at the San Francisco meeting, 1911, published in the Proceedings. The pamphlet containing the material presented with the preliminary report, which represents the opinions, experiences, and experiments of many leaders in educational thought, has been especially useful to the committee. It has enabled each member of the committee to secure the active cooperation of many educators in his line of investigation, and has awakened an extended interest in the whole subject. Within two or three years the committee has been encouraged by the appointment, at the invitation of the council, of two cooperating committees—one of the National Association of State Universities, the other of the national Department of Superintendence. These committees are as follows:

Committee of the National Association of State Universities:

Albert R. Hill, president of the University of Missouri, chairman;
 William L. Bryan, president of Indiana University;
 Jacob G. Schurman, president of Cornell University;
 Frank Strong, chancellor of the University of Kansas;
 Frank L. McVey, president of the University of North Dakota.

Committee of the national Department of Superintendence:

Harry B. Wilson, superintendent of schools, Topeka, Kans., chairman;
 John H. Francis, superintendent of schools, Los Angeles, Cal.;
 Frank E. Spaulding, superintendent of schools, Newton, Mass.;
 Frank E. Thompson, professor of education, University of Colorado;
 O. I. Woodley, president of Normal School, Fairmont, W. Va.

This report has been long delayed, and now is only a formal statement of what has become, largely through publicity already given, a national question. This can not be regarded as a finality or even as in itself a satisfactory presentation. But we believe much has been accomplished by the committee, even if the present report were omitted. It must be remembered that the full report is constituted by the following, under the original title of "The Culture Element and Economy of Time in Education," now "Economy of Time in Education:"

Need of Investigation—Pamphlet published for use of the committee by the National Education Association, 1908.

Review and Abstract—Proceedings, 1908.

Report of Progress—Proceedings, 1909.

Report of Progress by the chairman under the title "Reorganization of American Education."—Proceedings, 1911.

The present formal report.

The report of the committee of the national Department of Superintendence—to be made.

The report of the committee of the National Association of State Universities—to be made.

The thanks of the committee are due to the many educators who have responded ably to the original formal inquiry, and to those who have cooperated with each member of the committee in his special phase of the subject.

JAMES H. BAKER, *Chairman.*

REPORT.

NATURE OF THE INQUIRY.

This investigation was prompted by the seeming need of a comprehensive view of the whole field of American education. Special problems were discussed in a fragmentary way, without consideration of related questions and without hope of even temporary conclusions. The length of the college course, and the relation of the college to the university proper, was a leading topic. But this involved the question of the length of the whole period of general education, the waste in elementary education, the place of the secondary school, the relation of educational aims to civic needs and the ideals of our civilization, the definition of culture.

The problem assumed this form: The period of general education is too long; economy in the selection of subjects and topics and in methods will save approximately two years in the whole period of general education; with greater efficiency in the earlier periods the college course may well end nominally at 20 instead of 22; a redefinition of culture may modify the preparatory period; the ideals of our civilization to-day may affect the view of culture and the desirable limit of formal training.

LENGTH OF THE PERIOD OF GENERAL EDUCATION.

By reference to the original questions and summaries (p. 63) it will be seen that two-thirds of the correspondents would shorten the period of general education, and that the majority of these place the end of the college at 20 or earlier; the doctorate or the professional degree (for those including the college in their preparation) would be obtained at about 24 instead of 26 or 27.

The length of the preparatory period in America is exceptional. The German student advances at once from the gymnasium to the university. The French student enters the university from the lycée, except that for certain faculties a year or two of supplementary preparation is required which may be taken either in the better lycées or in the general courses of the university. The English student enters the university from the public school; and Oxford and Cambridge are universities in a sense not represented by the American college. The English university, besides the traditional course which has always had a special significance in England, offers at the start a choice among many groups leading to law, medicine, theology, or a

knowledge of various sciences. It is understood that the nominal age for completing the secondary course in European schools is the same as for our high-school graduation.

Since the early New England college we have added four years to preparation and three or four years to specializing for the professions. Instead of converting the college into a university, we have piled the German university on top of our imitation of the English type (the college) without adjustment of the educational system, and the condition is full of difficulties and absurdities.

The early New England college met the simple conditions of its day and served both as a school of culture and in a way as a professional school. Until comparatively recent times it still performed a widely useful function as a broad preparation for business and the professions. But the recent rapid differentiations in professional, commercial, and industrial life, and the increased demand for knowledge and skill in each line, change the whole aspect of the college problem in so far as in the past it represented professional training. Special education must occupy, in part at least, the place of the college. To-day the college, interposed between the high school and the university, occupies an anomalous position, and one that is no longer tenable unless important adjustments are made. The high school and the university include its former functions.

A large majority of the opinions received express strong criticism of the waste in education and of unsatisfactory results, and contain able suggestions of adequate remedies. But this belongs to a later discussion.

The committee agree (and for reasons which will appear) that "graduate" and professional studies should begin at about 20. They will attempt to show that the saving of two years in time need be no loss in education.

The committee here present a provisional time scheme to be discussed later:

Elementary education.....	6 to 12
Secondary education (2 divisions—4 years and 2 years).....	12 to 18
College.....	18 to 20 or 16 to 20
University (graduate school and professional schools).....	20 to 24

EDUCATIONAL PRINCIPLES INVOLVED—VOCATIONAL EDUCATION.¹

Perhaps the most difficult part of this investigation is the one involving principles of education and the relation of vocational education to the main question. Here is a brief summary of the committee's views:

1. The period of general education must be shortened in order that the vocation training—that of the graduate and professional schools—

¹ See Prof. Suzzallo's special report, p. 20.

may fall within the period of greatest energy and adaptability. In other words, there must be an economic division of time in the "plastic" period between general and special preparation for life. Too long a period of preparation, general and special, may unfit for action. The age of 22 is too old to begin specialization, and 27 is too old to begin apprenticeship in a profession.

2. There is loss of interest and energy in a long preparatory period of unmotivated study.

3. The fundamentals of elementary education—facts, habits, dexterities, sentiments, etc.—can be taught in six school years, allowing the elementary period to end at 12.

4. At the end of the first six years of school the child requires new and varied interests, beyond those found in the elementary curriculum. Many believe that for physiological, as well as psychological, reasons a beginning in subjects and methods of secondary education should be made earlier.

5. By a division of the six-year high school into two periods, junior and senior, a large number would complete the first period; the plan would be adapted to an advanced grade of vocational school between 15 or 16 and 18 for pupils unable to continue a general course. The whole scheme then would provide for vocational lines of work beginning at 12, 15 or 16, 18, and 20.

6. For economy, subject matter should be made a means and not an end. The aim should be to gain a few fundamental facts, power and inspiration, and the ability to go alone. There is great waste in material and method.

7. The idea of culture must be modernized, reinterpreted in terms of present-day need, in terms of the value of the individual in the industrial and the social scheme. Every man has his own definition of culture, and for a particular discussion it means nothing if not defined. The majority of our correspondents give culture a wide meaning and include whatever prepares for the large demands of life—personal efficiency, civic fitness, rational enjoyment. Each member of the committee would define culture differently, but agree that it should include power for the higher appreciations of life. They further believe that culture may grow out of an education which is more conscious of its motives and spends less time in purposeless study. Culture in the sense of power of appreciation is not a "study," but is due to timely suggestion, inspiring influence, and guidance. There is much waste in the 16 years of general education, and "culture" has been made the chief excuse for it.

This report has to do primarily with the whole period of general and special education for those who take both in their entire extent. But since the problem of vocational studies also affects the question,

it can not be omitted. The status of this problem in the United States to-day is about as follows:

1. It is understood that boys who, through the home, have gained some kind of manual skill, such as may be had by working in shops or on the farm, have a great advantage in substantial character, and in a wise attitude toward life.

2. Motor training in various forms is a recognized part of general education. Manual training has a well-recognized general educational value.

3. Vocational education (commercial, technical, industrial, trade) is now making large claims on the public schools.

4. Conservative educators would connect all work looking toward a vocation with the present schools, allowing for it about one-fourth of the time, making it elective, making it preparatory to various industries, limiting the kind and number of industries selected by the conditions of each locality.

5. A larger number would separate vocational work from the regular schools.

6. For a large class of pupils it is proposed to begin industrial education (general foundation for each of several industries, together with selected general studies) at about 12 and end at about 16.

7. A majority claim that trade schools as such, leading to apprenticeships, can not be profitable before 16; that, whenever possible, trades are better learned in connection with the shops, but that compulsory laws should secure part time in school for young apprentices.

8. There are special problems in highly congested centers that would greatly modify the general principle and call for earlier and more technical preparation for industrial work.

The committee are in sympathy with the wise claims of industrial education, but believe that the heritage of the race in the form of systematized knowledge will always be the foundation of education. They believe that humanism in the form of interest in the thoughts and lives of men needs not less, but more, emphasis; that scientific knowledge, rational power, and æsthetic and ethical appreciation are the highest ideals of our civilization, but that learning will be more and more vitalized by relating it to the life of the present day.

Representative opinion holds that our schools are not giving results proportionate to the time, in efficiency, culture, or character. There is a growing belief that in the name of culture much time is wasted, without securing real culture or substantial character, which is the prime element of culture. As an economic ideal, the vocational movement looks toward preparation for skilled employment for those pupils who otherwise would leave school and become unskilled laborers. The fact that under present conditions many pupils leave

at the end of the sixth grade is an additional argument for the time scheme proposed by the committee. The demand upon the scientific and professional schools for thorough and extended courses calls for economy in all the preparatory courses (including the college). The vocational movement in the end will not detract from the culture ideal, but will give it a clearer interpretation. We believe that nothing will be lost to the best ideals of our civilization—power of reflection or the need of transmuting wealth into scientific knowledge, literature, art, and ethical standards. Allowing for all historical differences, the results in older countries, in developing high intellectual power, confirm this view of the educational scheme.

SOCIOLOGICAL VIEW.¹

The relation of our educational aims to civic needs has been too much neglected. Every kind of a scientific, philosophical, and experimental method of studying education is in vogue, but the criticism of results, now so common, awakens us to the need of a simple examination of the ends proposed, and adapting the means to the end. Throughout the history of civilization, education has been determined or modified by the ideals and philosophy of the people, and by material conditions of life, and we in America can not ignore the just claims of representative criticism outside of the calling.

If we understand the conditions to-day, there is a demand for more efficiency, and for a culture which is related to real life and whose core is moral character. Education must be in harmony with its environment, but it must develop also original power to change the environment and to cope with whatever problems of efficiency and ethical conditions a given period may present.

If it is important to study education in terms of sociology, the greatest need of the sociologist is to study his problems in terms of education. Teachers are beginning to take this view. Students of society acknowledge the need, but confess neglect of the related field of education. However, some truisms might be made a beginning of investigation.

We may suppose that the sociological view to-day would be democratic in spirit and practical in aim, while regarding higher values. It would emphasize service, efficiency, and, connected with these and in part growing out of them, the culture ideals of art, ethics, and truth. It would give a new importance to the relation of man to men and indicate motives and methods. Stress has been placed on man's relation to nature; sociology will become a science when greater meaning is given the new humanism.

New views of the needs of society change the old aristocratic ideal of culture and make it democratic in opportunity and purpose. This

¹See Prof. Suzzallo's special report, p. 20; also Prof. Small's special report, p. 35.

change requires that less time be given the old humanities and more weight be placed upon preparation for efficiency and service. The scientific method, broad concepts, and the higher appreciations must ever be the foundation of citizenship and of practical activities; but a larger proportion of time must be given to the vocational aims. This ratio will be approximately determined as a question of proper balance between receptive study and practical motor activity, also as a question of the economic division between preparation for life and active life. There has always been a selfishly unsocial factor in culture, and the whole movement of to-day is to correct this by connecting higher education and all education with democracy.

If, as in Germany, professional studies began earlier, with the motive of service to the State, the false element in culture would be largely eliminated and a better citizenship would result. It would seem evident that earlier specialization, beginning at about 20, would promote all industrial and scientific interests, and would result in an expert knowledge of many problems of government and society. Moreover, there would be a distinct economic advantage, in terms of social fitness and intellectual power of the nation, in graduating earlier from preparatory courses, and carrying through real university training those especially fitted to profit by it. To consider the earlier years, many leave school at the end of the sixth grade who would be retained if practical studies were offered them. This would result in the efficiency of a larger number, and the training would have also a cultural value. Of course this is another argument for the time scheme proposed.

If we consider those who go through college and the professional school, by shortening the time the two additional years of active life and the greater power, hope, and enthusiasm of the earlier age would be a great economic advantage. It may be argued that here would be a loss in intelligent citizenship of the highest quality, because of the shorter culture period. But we believe the better methods of education in the proposed scheme of economy and the larger spirit of service would prevent any such loss.

Our great problem is to bring together the science and power of the schools and the popular will. The cooperation of higher education and democracy is the salvation of both. An educated aristocracy is not the ideal of the people, but a learning that shall be serviceable and represent their highest needs, aspirations, and ideals. They accept real culture, scientific power, trained skill, and are willing to pay for them. But they believe there is waste, a nonsocial element, inefficiency in some of the ways and means. The scheme proposed would tend to enlist the sympathy and support of the people.

ECONOMY IN ELEMENTARY EDUCATION.¹

We approach now the question of saving time in the elementary period or of accomplishing more within the time. There must be important reasons why in Germany, France, and England the secondary graduate is believed to be two years ahead of our high-school graduates. Here are some reasons, assigned by a recent writer, for the superior progress in German schools: Beginning many subjects earlier than is the custom in America, such as foreign languages, elementary science, history; absence of marks and examinations; care of pupils as individuals; greater length of school year. But this subject is treated in the special reports of Supt. Van Sickle, Supt. Smiley, and Prof. Suzzallo.

The committee agree that there is much waste in elementary education, and that the elementary period should be from 6 to 12. Nearly all of our correspondents are emphatic regarding waste and the importance of shortening the entire period of general education. Saving of time can be made in the following ways:

1. The principle of selection is first: Choose the most important subjects and the most important topics; make a distinction between first-rate facts and principles and tenth-rate; prune thoroughly, stick to the elements of a subject; do not try to teach everything that is good; confine the period of elementary education to mastering the tools of education. This does not prevent inspirational work, which is a demand on the skill of the teacher rather than on time. A great secret of education is to accomplish a maximum of training with a minimum of material. This is especially true of formal subjects; it is true also of inspirational subjects in that after a general survey of the field emphasis should be placed upon a few selected points. Under the conditions above enumerated the formal elementary period can end in six years.

2. Content subjects should not be taught with the methods suitable to the formal subjects; for instance, in the elementary period literature, history, science should be inspirational; this does not mean presentation to pupils of amusing stuff. No doctrine has been more harmful than that one subject of study is as good as another, and that all subjects should be taught alike; arithmetic is a tool and a discipline in absolute accuracy; literature, history, and elementary science in this period are for culture.

3. Include the last two years of the elementary school in the period of secondary education and begin the study of foreign language, elementary algebra, constructive geometry, elementary science, and history two years earlier.

¹ See Supt. Van Sickle's special report, p. 39.

THE HIGH-SCHOOL PROBLEM.¹

It will be seen by reference to the original "questions" (p. 63) that the majority of correspondents favor a change in the high-school period and that the preferences are for 12 to 18. The committee favor the change noted in a previous statement, for the reason that it will adjust itself to present tendencies more conveniently than any other, and because it represents, we believe, essential principles in the organization of education. The proposition to make the high-school period 12-18 or 12-16 and the college period 18-20 or 16-20 will adjust itself in the following ways: (1) It begins high-school work at the proper time and continues it to the recognized age of college admission or of beginning life (12-18); (2) it provides for a large number who will enter vocations at 16 and adjusts itself to the idea of an intermediate industrial school (12-16); (3) it provides for the contingency that the college course in the reorganized scheme will end with the sophomore year and that the two years of college may be done in the university or in the larger high schools, and that the independent colleges may make a four-year course (16-20), admitting from the smaller high schools at 16. It should be noted that this whole discussion is a vastly different thing from the question of shortening the college course.

As to economy of instruction, the following principles may be stated:

(1) In general the principles recommended for elementary education apply equally to secondary education.

(2) Simplify the courses of instruction; cease multiplying subjects; concentrate on a few valuable studies—it is not necessary to take all the sciences in a high school; make college entrance requirements reasonable. The great mistake of our education is to suppose that quantity and strain constitute education. Education is a question of doing a few essential things well and without overstrain. The college has committed a grievous mistake in demanding ever more in quantity rather than in quality produced under conditions of healthy normal development.

(3) It is of prime importance that, so far as possible, subjects be vitalized and related to modern life, and be adapted to the pupil's interests, capacity, and mental development.

(4) The principle of selection obtains here—choice of subjects and of facts and principles under each subject; also differentiation of method—training from formal subjects, and knowledge and inspiration from certain content subjects.

(5) By far the greatest emphasis is given by our correspondents to moral training and preparation for citizenship.

¹ See Supt. Smiley's special report, p. 45.

(6) Under the conditions recommended for elementary and secondary education, the committee believe that as much can be accomplished at the age of 18 as at 20 under present conditions, and that the period now represented by the school and college can be shortened at least two years. It is to be understood there should be less, rather than more, cramming, strain, and mechanical measure of values. The following quotations are apt:

An interpretation of any (elementary) course of study that will keep the amount of detail and abstract work down to a minimum; that will plan to make the activities of the school akin to practical life; that will place the development of power on the part of the child to do something above the mere accumulation of facts, will, I am confident, reduce the length of the elementary interval.

The experience of the American colleges goes far to prove the Germans correct in drawing the dividing line between liberal and professional studies at the age of 18 or 19. Our boys generally stay at school until that age, and I want to ask, what is there to hinder the schools from completing a youth's liberal education at that age? In other words, from taking over the work of the first two college years? I think that there is a possibility of enriching our courses without putting too heavy a burden on the shoulders, or rather the heads, of our boys.

THE COLLEGE PROBLEM.¹

In a way the whole previous study has been made with reference to the college problem. The committee believe that shortening the whole period of general education is inevitable and necessary; that college work must end at about 20, and university work must begin at that age. Since this result appears to be in the near future, is it not time for the universities to take hold of the problem and aid in the reorganization of the scheme of education? A somewhat remarkable judgment appears in the summary of the opinions of our correspondents upon the subject of the college and university.² Approximately one-half favor ending the college work with the sophomore year and beginning university work with the junior year—this work to count toward the higher and professional degrees—and building the schools of medicine, law, and engineering on the present first two years of college. In other words, the university age is to be 20, instead of 22. Until the reorganization and adjustment are effected the majority would retain the A. B. degree at its present standard, allowing, however, almost any consistent group, cultural or professional, to be elected the last two years.

The present tendency in the reorganization of the college is really preparing the way for the adjustment recommended. We quote from a report made to the National Association of State Universities and unanimously adopted. This part of the report was really intended to look forward to the time when the university would be founded on two years of college.

¹ See President Baker's special report, p. 50.

² See page 63 for questions and summaries.

Present tendencies point, in our opinion, then, to a definite differentiation in the work of the college at the close of the sophomore year toward university work in the real sense. If these views are just, we suggest the following formulation of principles underlying the organization of such an institution, and we may define the standard American university to be an institution—

Which offers in the college of liberal arts and sciences two years of general or liberal work completing or supplementing the work of the high school;

Which offers a further course of two years so arranged that the student may begin work of university character leading to the bachelor's degree at the end, and reaching forward to the continuation of this work in the graduate school or the professional school.

In recommending that university work begin with the junior year of the college and that the professional schools be based on the first two years of college, the report is in line with present tendencies. It is in accord with the growing belief that the work of the last two years of college should be organized into groups that aim at more definite results and lead to greater efficiency. But this is only the first of many problems. We are facing questions of the time beyond the junior year for attaining the Ph. D. degree, of adjusting the scheme of counting the last two years toward both arts and professional degrees, of the place of the A. B. degree, of the age when the period of general education should end, and of a possible reorganization of elementary and secondary education. But these questions are not ready for solution and hardly belong to the work of the committee at the present time.

When by economy—this does not mean more cramming, but less—as much can be accomplished in the elementary and secondary schools and in the first two years of college as is now done in the full 16 years, the last two years of college can count toward graduate and professional degrees, and two years in the whole period can be saved. In other words, the graduate school and the professional schools constituting the university would be built on the first two years of college. The present device is a makeshift. Finally, this whole discussion is to be understood as looking toward a very different thing than the shortening of the college course.

CONCLUSIONS.

The committee draw the following general conclusions:

1. The contemporary judgment is that the period of general education should be shortened at least two years.

2. This judgment is supported by the demands of society to-day, both practical and ideal.

3. It is claimed that more will be accomplished for a people if the preparatory stage of education ends at a reasonable period and special aims be emphasized while the mind is at a high degree of adaptability, energy, and interest.

4. In the elementary and secondary periods, economy through selection, elimination, vital methods, relation to modern life, would yield much better results, and little or nothing would be lost by the proposed change in time.

5. The American college in its present form presents problems for immediate solution; there is no longer an excuse for it as a mere four-

year addition to the two earlier periods of education. The history of European education supports this view. This is not the same question as that of abolishing the college or of shortening the college course.

6. It is recommended that all university colleges organize the last two years in view of the coming elimination of two years in the whole period of preparatory education, and make them of the university type in form and method. When the college degree can be reached at about 20, those two years can become a part of the real university, consisting of a reorganization of the present graduate and professional schools.

7. It is recommended that the "National Association of State Universities" and the national "Department of Superintendence" be urged to continue their work on this problem—both the economy of time in the period of general education and the form of reorganization throughout; that the "Association of American Universities" be invited to cooperate. Upon these bodies will rest the responsibility of a final solution.

8. To define the form of discussion, the following divisions of the entire period of general and special education are proposed:

Elementary education.....	6 to 12
Secondary education (2 divisions—4 years and 2 years).....	12 to 18
College.....	18 to 20 or 16 to 20
University (graduate school and professional schools).....	20 to 24

(Signed)

JAMES H. BAKER, *Chairman.*
JAMES H. VAN SICKLE,
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ALBION W. SMALL,
Committee.

SPECIAL REPORTS.

EDUCATIONAL PRINCIPLES INVOLVED.

HENRY SUZZALLO.

THE VIEW OF THE PHILOSOPHY OF EDUCATION.

Any final plan for the reorganization of American education must be made with consideration of all the factors involved in the social and educational situation as we find it. The special points of view of cultural and vocational education, the particular institutional practices of elementary, secondary, and collegiate training, and the demands of the physiologist, psychologist, and sociologist must each be taken into account; but, finally, they must be related in a wholesome scheme of education that will respect every element in the situation while it evaluates each and relates all. An integrating theory of educational reconstruction can hope to be sound and useful upon no other basis. The proposals here offered are therefore made from this broad and inclusive point of view.

(1) THE SCHOOL SYSTEM MUST PROVIDE THREE TYPES OF TRAINING.

Our schools have no other object in mind than to train men for an efficient social life, on the assumption that in the long run the vast majority of men will lead a richer and happier personal existence if their activities are harmonious with social welfare. Ordinary observation of the failures of men and women in life indicate three types of inefficiency: (1) They are not sufficiently responsive to the common institutional demands which rest upon men in general. The indifference of men to ordinary moral and social obligations indicates a defect in the liberal education which is designed to bring them into appreciative cooperation with their fellows in matters which concern the common good. Or (2) they are not adequately equipped with the knowledges and powers which make them resourceful contributors to the world's work. It is already apparent that men must have a more adequate vocational education than existing institutions now provide. Or (3) they do not indicate a sufficient capacity for adapting their school training to the practical situations which everywhere condition concrete success in life, whether the domain be that of general political and social cooperation or of specialized vocational workmanship.

The school system is not solely responsible for these maladjustments, but its share is considerable. The history of the school's relation to society seems to indicate that, under the conditions of our present social evolution, the school's part is constantly growing larger. It is therefore probable, as it undoubtedly appears to be expedient, that the school system must assume to provide its members with a more extensive and efficient training than it has hitherto undertaken. This total care of the individual will include an efficient and economical system of education the mechanism of which will prepare for three related but distinct types of adjustment. These will be: (1) A series of general, cultural, liberal, or common schools—elementary, secondary, and collegiate—the function of which will be to train men for the maintenance of a progressive civilization through efficient membership in the common human institutions in which each man must inevitably be a unit of influence. (2) A series of more or less specialized vocational schools, extending from trade to professional education—the purpose of which will be to acquaint men with the informations, appreciations, and activities that are essential to personal working power in a chosen occupation. And (3) a varied series of cooperations between school and other institutions which will guarantee an apprenticeship under actual living and working conditions, the supervision of which is to be dominated by educational ideals and controls that guarantee that the growth of the apprentice shall be a more important consideration than his commercial productiveness. The first of these needs has been somewhat completely, but not altogether efficiently, met. The second is provided for very inadequately, the higher levels of professional education having a traditional establishment to the neglect of the lower academic levels of industrial, commercial, and agricultural education. The third is unprovided for, cooperation between the school and the economic institutions of men being a new relationship which has hardly received more attention than occasional experimentation has provided.

(2) THE PERIOD FOR GENERAL EDUCATION MUST BE SHORTENED.

If the school system of the immediate future is to be organized with reference to three types of training, instead of one, the period of life allotted to liberal education must be shortened, so as not to usurp the plastic and leisure period of life so completely as to deprive youth of its right to vocational education and the training which apprenticeship under actual conditions provides. The period of general education will still vary with mental ability and economic status. Under any scheme of reorganization, some individuals will have only an elementary school education, others a high-school training, and still others a collegiate course. But, on the whole, there ought to be a relative shortening of the time given to the cultural training of various social groups.

(a) COLLEGIATE EDUCATION SHOULD END WITH THE TWENTIETH SCHOOL YEAR.

That class in the community specially favored with mental ability and financial resource, and for whom the colleges are intended, should in general complete its liberal education by the end of the twentieth year. There are many substantial arguments for such a reconstruction, only a few of which may be mentioned here:

In the first place, the period of plasticity during which a human being can be profitably educated is not coterminous with life; people may be somewhat flexible and educable to the end of life, but the period of greatest educability closes for most by the end of the twenties. There is considerable variation in individuals, but, in general, a man who has not found his work and place in life by the time he has reached his thirtieth year is indeed unfortunate. His chances of success are greatly diminished.

If the period of plasticity is thus confined, it is essential that every important and requisite mode of training fall well within the period of plasticity. Now, the modern contention is that a man's adjustment to the world in which he lives is dependent upon three types of training: (1) A general or liberal education which will give him a command over those human institutions in which he holds a membership in common with other men; (2) a specialized vocational education which will fit him for his particular economic function; and (3) an apprenticeship to his specific work and station in life which will snugly fit his theoretic education to the concrete and practical situations which he must meet.

If our scheme of general education takes till the age of 22, vocational education and apprenticeship, at least for those who go into professions, must be crowded into the six or eight remaining years of plasticity. This would seem to be a disproportionate allotment. More often than is desirable, if observation counts for anything, the college graduate is left without the eagerness and adjustability to pursue his vocational education and to undergo the specific and somewhat trying apprenticeship through which the world insists upon passing its young. The ordeal of doing practical work in a subordinate position ought to be presented two or three years earlier to most college boys, say, at the age of 23, when his professional school course is over.

In the second place, the feasibility of such a reorganization of our schools is proved by experience both abroad and at home. The theoretic grounds advanced find corroboration in the accepted institutional practice of European schools and in the results of American experimentation.

For the most part, England, France, Germany, and other less important European countries have a system of school organization

which provides for a completion of the period of general education by about the eighteenth year. There are variations in the cases of both individual persons and particular institutions, but the general practice proves the accuracy of the contention that the period of general education may be closed earlier than is the case with our general American practice without any appreciable loss of efficiency and, indeed, with an appreciable gain.

The American school organization is, in its lengthened period of general education, an anomaly among national systems of education—an anomaly created by an accident of history. Once the American youth completed his collegiate training four or five year earlier than now. This period has been extended by an increased standardization of the academic attainments of the lower schools, enforced by higher institutions. The German university and the English college, once parallel developments and roughly covering about the same age period, are, in America, treated as institutions of different grades, the German university being superimposed upon the Americanized English college.

Such attempts as have been made in the United States to shorten the period of general training by two years substantiate the European experience. Wherever the professional training has been provided at the beginning of the junior year of college, we are led to believe that the articulation has been successful. So successful has it been in the eyes of the university administrators that the association of State universities has declared for a distinct articulation at the close of the second collegiate year.

It would seem certain then that the period allotted to the general education of the group that goes to college should be shortened two full years, because: (1) Present American practice is an anomaly, the product of historic accident rather than of direct adjustment to human needs; (2) vocational education and practical apprenticeship absolutely require a fairer share of the period of plasticity than they are now receiving, and (3) educational experience carefully studied and interpreted indicates the irrationality of American organization and the efficacy of the suggested reorganization.

(b) ELEMENTARY EDUCATION SHOULD END WITH THE TWELFTH YEAR.

When we pass to a consideration of that social class which stands at the opposite extreme of those who go to college, we find many grounds that suggest the wisdom of completing the elementary school at the close of six years of instruction.

In the first place, such expert testimony as we have indicates the presence of considerable waste time and energy in the elementary school. There is a very widespread belief among school men that the fundamental facts, habits, attitudes, and ideals demanded by

the general needs of our civilization can be fixed in the nervous system of the child in six school years, particularly if the less useful parts of the course of study are eliminated and more efficient methods are introduced.

In the second place, the compulsory-education law under our present organization gives society control of the child only long enough to guarantee the ablest child eight years of general training. It cannot guarantee him the additional years of vocational education required to make him an efficient, self-supporting, and self-reliant citizen. To shorten the elementary school to six years without impairing its efficiency is to guarantee every child who does not go to the high school some vocational education. The need to guarantee some vocational education to the retarded pupils is so important that many careful students of social conditions are ready to say that the compulsory school age must be extended to 16 years, so as to carry the least able elementary school children, who now get no further than the fourth, fifth, or sixth school year, through one, two, or three years of vocational education.

In the third place, the six-year articulation is regarded not only as a better ending point for the general elementary studies, but as a better beginning point for the secondary studies. There are certain inner physiological changes that usher in adolescence that now occur at about the time when the average child makes the transition from elementary to secondary school. The strain of outer and inner conditions are more or less coincident. Therefore, the resulting school mortality is likely to be larger than it ought to be; or school life is continued at a larger physical and nervous cost than ought to be the case. It would be a distinct gain for a child to get fairly well started and adjusted to his new school life, vocational or secondary, before the full weight of physiological and nervous changes are thrust upon him. The two adjustments can be better cared for in series than together.

Again, it is the opinion of schoolmasters in general that, for those who have the peculiar mentality to go on to the ordinary academic high school, it is decidedly more profitable to begin the foreign languages at 12 than at 14 years of age. The same advantage may be had in other subjects where a large acquisition of facts is necessary to successful work.

In the case of those children who are more given to action than to abstraction, it is equally profitable to begin to center their intellectual work about an active vocation early. To begin vocational education, with its practical life-career appeal, at 12 rather than at 14 is to save many children from truancy and disinterest. It will extend their school life so that they will not be too early driven into unprofitable and futureless employments. They will still take up much general

training parallel with and motivated by their broad study of vocational work.

Here again the practicality of a reorganized elementary school period finds adequate sanction in experience. We have only to turn to the concrete efforts in this direction that have already been made by American schoolmen. Such experiments as have been tried in American school systems under practical operating conditions prove with certainty that the elementary school may be reduced to seven years; and that there is an almost equally strong probability that an elementary school of six years would be fully as efficient. Where the seven-year school has been tried, the school officials very generally anticipate a six-year plan. The organization of junior high schools out of the two upper grammar grades and the first-year high-school class is a distinctly successful move in the same direction. Here the high school begins to reach down into the grammar school. The establishment of separate departmental schools in the elementary system, consisting of the two upper elementary years and given over to manual activities, is the vocational movement beginning to claim its own from the elementary school system. All sorts of successful experimentation tending to restrict the general elementary curriculum to six years give at least tentative, fragmentary approval to the practicality of the plan suggested.

(c) SECONDARY EDUCATION SHOULD BEGIN WITH THE TWELFTH AND
END WITH THE EIGHTEENTH YEAR.

If the previous contentions with regard to elementary and collegiate education are established, the period of secondary education will begin with the twelfth year. The question then arises, When shall it end? As at present, at the end of the eighteenth year? Or later, so as to include the freshman and sophomore years of college, thus abolishing the tertiary or collegiate division of liberal training? These are questions difficult to answer, because they raise the problem of articulating our three types of schools for general education with each other and with schools for vocational education. They involve, too, the need to know the valid distinctions which can separate a continuous system for cultural education into three distinct institutional units.

The secondary school has tended to extend its limits upward to include the first two years of college, as well as downward to include the last two years of the elementary school. But the former tendency is comparatively slight. The mass of experience seems to favor the latter, as has already been suggested; and the theoretic considerations corroborate actual practice in this direction. The inclusion of the two collegiate years in the high-school unit is opposed by arguments of a sort difficult to overcome. The largest gap in our school system

exists between high school and college. The most advanced teaching of a cultural type is very closely dependent upon the research of the university in replenishing its stock from advancing knowledge. The equipments required by college and university are more nearly coincident than those of college and high school. Endowed institutions constitute a larger proportion of the schools for higher education than they do for secondary education. An upward extension of the high school is so difficult as to seem inexpedient, while a downward extension seems logically to be a line of least resistance. On these grounds it is probable that, in the generality of cases, high-school education will plan to include the period from the twelfth to the eighteenth year.

The objections which have been urged against the inclusion of the collegiate years by the high school hold largely against any proposal that the college should attach to itself the upper two years of high school. Such a proposal is not seriously made. If it were, all our current tendency would be against it. Even the smaller colleges are tending to drop the preparatory academies or high schools which have so frequently been associated with them. The larger institutions did so long ago. The discussion of any such proposal to extend the college downward would therefore be largely academic.

(d) THE SECONDARY SCHOOL OUGHT TO BE SUBDIVIDED INTO TWO ADMINISTRATIVE UNITS—A JUNIOR HIGH SCHOOL AND A SENIOR HIGH SCHOOL.

A six-year unit in the elementary school is not objectionable. The extreme immaturity of the pupils requires a long period for substantial achievement. The amount of basic knowledge and power to be acquired by them forbids selection of pupils and specialization of their activities at any time within the first six years. But these arguments do not hold in the case of the high school. The students are more mature; they are free from the restrictions of compulsory education; they are already discovering the personal interests and limitations which point toward specific types of training and life work. They feel the pressure that comes from the financial limitations of their families. No matter how varied the offering of studies is, or how adjustable the privileges of election, the six-year course is not an attractive or practical scheme for all those who might be able to pursue their general course beyond the primary school. It ought to be subdivided into two administrative sections: (1) A junior high school of three years, extending from the twelfth to the fifteenth year; and (2) a senior high school, also of three years, covering the period from the fifteenth to the eighteenth year.

Such a subdivision and point of articulation is necessary upon social as well as individual grounds. A three-year junior high school

will assure a larger number of citizens possessing some cultural training of a secondary grade than a six-year high school. A point of articulation in the middle of such a high-school system would afford an appropriate position for the establishment of vocational schools of a type now largely missing in the proposals for vocational schools.

When we examine the schools' traditional provision for vocational education, we find it almost confined to professional education. The more recent proposals and innovations deal almost entirely with the training for those commercial, agricultural, and industrial occupations which may be entered soon after the completion of the elementary course of study. A casual analysis shows that the middle groups of occupations that are distributed between the industrial trades at one extreme and the professions at the other are not adequately cared for. The scheme of vocational education must finally include these, if our provision is to be efficient.

The period of general education beyond the elementary school must provide frequent points of articulation, so that the inevitable selective function of the liberal schools may be supplemented by a series of vocational schools into which those who can not go on may be distributed. Under the scheme thus far discussed, points of articulation between the general scheme of education and a special series of vocational schools would be provided at the twelfth, eighteenth, and twentieth years. The gap between the twelfth and the eighteenth year is too large to suit human nature, economic ability, or social needs, and should be broken in the middle, say, at the fifteenth year. This is in line with tendencies already established, as no other suggested point of articulation within the six-year high school is.

(e) THE STANDARDS OF CULTURE MUST BE MODERNIZED TO MAKE OUR
GENERAL EDUCATION EFFECTIVE.

It is apparent that shortening the period of general education by two years necessitates more economical methods than are now employed. But no policy of economy may be applied that does not take account of efficiency. All economies are relative to the purpose of our schools. What, then, is the object of our system of general, liberal, or cultural schools? The descriptive terms themselves suggest the various points of view by which the standards of our common training are determined.

In terms of the individual's relative responsibility for service, a general education prepares a man for the common duties of life, those which are to a considerable extent unspecialized. In so far as men enjoy membership in common institutions, they require com-

mon knowledge, habits, ideals, appreciations, manners, and powers. This common possession of men is what guarantees social solidarity. Without it we lose the ability to live and work together profitably and happily. Where vocational training lays stress upon specialized responsibility for contributing through deeds, general training puts emphasis upon the common appreciations and understandings which men should possess to comprehend and check every tradition and innovation which affect social welfare.

In terms of psychological freedom and restraint a liberal education implies that school training shall so train men for the situations of life that they shall feel free in their choice of personal action and at the same time find their decisions consistent with the public good. The processes of a liberal education will therefore tend to make personal and social will coincident. Respecting every fundamental instinct, impulse, and interest of human life, it will remold them in terms of accurate knowledge and abiding ideals, so that personal life will enrich both itself and the civilization in which it participates.

In terms of the wisdom which has been accumulated during the long course of our institutional development a cultural training gives the individual an efficient command over the intellectual, moral, æsthetic, social, religious, and vocational experiences of our historic civilization. These experiences are to be the evidences upon which the conduct of his life is to be based, the materials for interpreting the situation, thoughts, ideals, and actions of his own life and time.

Each of the three views would aim to produce men who would possess (1) that scientific knowledge and mental power which would give them a firm rational command of life; (2) that sense of human kinship with their fellows which would insure a sympathetic attitude toward other men, an impulse to social service and a respect for the established moralities of civilized life; (3) that sensitized æsthetic appreciation which reconstructs the material world and organizes social relations in nobler and more congenial forms, and which guarantees a noble disposition of the leisure of life; and (4) that command over personal action and expression which gives to human activity that enchanting forcefulness which substitutes leadership for coercion.

Such a view of the functions of our general or cultural education is a statement of our ideal need. In an imperfect world of men and external conditions, no full realization is possible. It would be desirable to have men equally cultured, but it is inevitable that they can not be. Our educational work is to approximate the fulfillment of these liberal ends to the fullest degree possible, considering the limited abilities, the restricted resources, and the short plastic period of human life.

In a rough way the school system makes such an approximation when it separates the period of general training into three units—elementary, secondary, and collegiate. Careful investigation of all the distinctions made between elementary, secondary, and collegiate education fails to reveal any large functional differences. Collegiate education is an intensification and expansion of the culture of the secondary schools, as that of the secondary schools is an enlargement of the liberal training given in the elementary unit. It is partly because lawyers, doctors, ministers, and teachers in high schools, more than any nonprofessional class, have a far-reaching influence on the fundamental institutions of life that we demand of them a preliminary education extending through the college. It is because the skilled craftsman and the larger man of business have a more general influence on common affairs than the unskilled workman and the commercial shop-clerk that one group usually goes through high school and the other does not. The articulations express the degree of general training which society in its rough wisdom decrees as necessary to protect the wider social interests which tend inevitably to be affected by the spirit and method of a particular vocational group. It is partly, too, because one series of vocations requires a broader intellectual background and a firmer command over mental processes for its technique than another. Thus the differing units of general education represent rough groupings of training for wider or narrower ranges of social responsibility and technical skill.

In general, it is true that in our social world a man's cultural responsibility and influence are established largely by his occupational placing. This intimate connection between vocation and culture has not been sufficiently considered in our theory of educational organization. It is important in determining the subdivisions and articulations which should exist in the scheme of general education. It is particularly significant in the attempt to determine what degree of cultural training is practicable for various groups of men who are to go through the general and the vocational schools. In the first place the nature of the general education given within a single school unit is determined by the life led by those vocational groups to which that particular school unit mainly contributes. In the second place it establishes the nature of the additional social, civic, or cultural training which should accompany and be dynamically associated with his vocational training. It is this that makes vocational education broader than vocational training (in the narrow sense that training means mere impartation of technical skills, to the omission of the social vision which is requisite in the solution of class problems).

There is no way by which our schools can give an efficient social education save through surveying the social situation and bringing the schools into harmony with external conditions and needs. The

schools can not blindly fit their students into the life and culture of another century. The needs of our own time and place are too imperious. Our cultural materials must be sifted so that obsolete values, facts, and disciplines are omitted and those most pertinent to present conditions retained. Our culture must constantly be modernized, that is, reinterpreted in terms of present-day need. The final worth of any knowledge, discipline, or culture that we have is to be measured by the answer it gives to the question, How does it increase the power of a man (with restrictions on his resources) to perform his part as a member of a family, a neighbor in the community, a coworker in a vocation, a citizen of the State, and a unit in humanity? The school can not answer this question merely by looking inward upon its own professional and traditional values; it must look outward upon the estates of all manners of men, and note what the pressures of life demand of them. In modernizing our conception of culture, we must recast our whole professional consciousness in social terms. It is the prime necessity in making our general education efficient.

(f) MORE EFFICIENT AND ECONOMICAL METHODS MUST BE USED, IF THE GENERAL SCHOOLS ARE TO BE RELIEVED OF OVERPRESSURE.

The waste in our schools for general training has been apparent. It will become more irritating, once we attempt to shorten the period of education by two full years. It will be doubly vexatious when we dare to add the new aspects of human training that modern society requires. Perhaps just this additional pressure is necessary to make us urgent in the improvement of our educational methods. Then, perhaps, we shall recognize that a cultural education must be measured by standards of practicality, less obvious but just as certain, as those which obtain in preparation for breadwinning. Who that is not superficial can doubt the practicality of a good character as a business asset? Who will not recognize the worth of a common stock of moral ideals, when two classes in the community wage unfair war upon each other? It must be our business to try to analyze more accurately than we have ever done the spiritual practicality of our general schools. Only then can we weed out our false practices and our ineffective instruction. It will be difficult to do, but it can be done, if we will only study men in the setting of a real social world. From the standpoint of the philosophy of education, there are three clear ways by which we can decrease the overpressure in our schools:

(1) We must rid ourselves once and for all of that fallacy which insinuates that education is to be completed for any person within a given set of schools. A broad view of life tells us it is experience which educates. We are made by the whole length and breadth of life. Other institutions than the school do mold the pupil's character;

life beyond the school will continue to amend it. The school simply occupies a strategic position in human life because it works upon a plastic infancy with tools that are of very superior power, if rightly applied. But the fact need not suggest that the school must complete any man's education. More than anything else teachers require the courage to leave things undone. To make that possible, the teacher must not be content to teach students all the facts they need to know finally. The school can not do it anyway. It should take the focus of its attention off facts and forms perfectly learned and habits and attitudes completely fixed, and divide its attention between (a) requiring a thorough acquisition of some fundamental things and (b) developing interests in the unmastered domains, along with the power to attack these fields when the grown man faces them in his adult life. The first economy in our education will come through a completely changed point of view as to the school's function. It will take the emphasis off subject matter as an end, making it a means, and lay the stress upon the development of the child's power to proceed alone. What does it matter that a child does not know everything, if the school will make him wish to do so and give him the power of independent thought and study? Six years of school life are merely six years of opportunity to grow in knowledge and power. Let the school do what it can in the allotted time, always remembering that the child must be equipped to go on without the teacher.

An incalculable waste occurs in our schools because this principle is violated. Fearful that the course will not be covered, that some fact will be left out, we hurry, crowd, and coerce children till they have no further interest in books when school is done. We have taught them many facts superficially, but we have shorn them of the power to educate themselves. Children who have been in the presence of good literature for years never seek it again, because the teacher has maltreated both the subject and the children with his pedantic insistence on details. They acquire no more facts when school is done, because they have not been taught to work in freedom, without the admonitions and compulsions of the teacher. We must aim to do more for human power, by striving to do less in the way of giving students information.

(2) We must reconstruct the course of study so as to eliminate that which does not need to be known, or that which is of lesser importance and can be gained by the student after awhile. No mere professional theory of discipline should be allowed to take precedence over real social need. The curricula of our schools must be made in the light of our social surveys of what men need in knowledge, habits, powers, skills, and values. And these surveys need to be made accurately. If the vocabulary taught in spelling contains 3,000 words,

these should be the 3,000 words most frequently used in the social world, not some mere compilation made on the guess of textbook makers. If his mathematical computations are taught him, they should correspond in fact and method with current adult practice. The selection of a course of study is always primarily a sociological matter; and every activity, traditional or innovative, should be eliminated when no relatively important social sanction can be found for it. All truth is useful, but in a few school years all truth can not be mastered; what is less important must be dropped if a more important element calls for its time.

(3) We must increase the efficiency of our methods of instruction. We are still divided into cults, as to teaching processes. If we like the old, we stick to a traditional procedure; if we are temperamentally fond of the new, we welcome innovation. We do not know the relative efficiency of an old as opposed to a new method; of a method used in one locality as compared with another employed in other school systems. We must as a profession eliminate the less efficient modes of instruction (a) by subjecting all our classroom procedure to the test of a comparative experimental pedagogy and (b) by establishing some central bureau of pedagogical knowledge which will keep the professional world informed as to methods and their values.

The waste in education will not be difficult once we have (1) attained a more natural view of the school's functions, (2) provided social surveys as a basis for constructing courses of study, and (3) established an experimental pedagogy for determining relative efficiency.

(g) OUR PROGRAM FOR VOCATIONAL EDUCATION MUST BE BROADENED.

The inadequacy of our scheme for vocational education has already been suggested in the previous discussions. It suffices to say that with four points of articulation provided in a reorganized system of schools for liberal education, there ought to be provision for groups of vocational schools at each of these points. (1) At the end of the second year of college, we already have our professional schools, but they require some reconstruction. (2) At the end of the six-year elementary schools we shall have our lower vocational institutions. We must provide vocational schools for those who go to the secondary school, but not to college. (3) At the end of the third year of high school we must plan an extensive group of mid-vocational schools. And (4) at the end of the high school we must enlarge the slight provisions already in existence.

Every type of vocational education must be established at its given point of articulation on the basis of a careful investigation of vocational needs, in terms of the basic cultural education and the

additional vocational foundation required. The length of the course of each, and its content, must alike be suggested by economic fact. In assuming a new obligation for which our scholastic traditions have not prepared us, nothing is more dangerous than a careless assumption as to need and a predisposition as to school organization. The vocational courses are more than likely to be extremely variable in length and the school scheme should be kept sufficiently flexible to take account of this fact.

Vocational education ought not to be mere trade training in skills. It is no mere repetition of apprenticeship under expensive conditions free from exploitation. It is a substitute institution superior to apprenticeship, but still lacking in some of the latter's good qualities. It is, in fact, a transition between cultural education and a shortened apprenticeship, where broad, human considerations are still joined with the demand for industrial appreciation and productive skill. The emphasis is not yet on the man's product, but on his developing ability to produce. The intimate connection between liberal education and vocational choice, already stated, implies that some general educational activities will still parallel the study of a special business. What is more important than that boys in a vocational school shall have their power to adjust to new trade conditions preserved by a wider training than that involved in their prospective job? What is more important than that men destined to become members of labor unions or directors of corporations shall view their specific life work in relation to the economic and social conditions and ideals which determine the common welfare?

**(h) A NEW SHORTENED AND SCHOOL-SUPERVISED APPRENTICESHIP
MUST BE PROVIDED.**

But when general and special education are completed, the knowledge and skill acquired must be applied to very concrete circumstances. The concrete situation is a frequent factor in determining success or failure. Some sort of apprenticeship is necessary, however much it will need to be shortened. The last adjustment of men's powers to their station and work in life must be made with their growth in mind. Apprenticeship that is to be effective to this purpose can not be left to corporation, institution, or labor union. The factory may make it too narrow for the operative's good; the hospital may turn its apprentice-nurse into a menial to save servants' hire; the labor union may obstruct and delay the development of the apprentice to lessen the labor supply. Sound public policy requires that the vocational institutions in which men labor and the schools which educate them shall cooperate. It will be difficult to achieve, but it must be accomplished. The few experimental efforts in this

direction have been too efficient as examples for us to longer delay the systematic attempt to provide an efficient apprenticeship under school control. The establishment of such an institution will require some readjustment of both school and work place, but the gain will warrant the effort that must be expended upon this stubborn problem.

(i) THE SCHOOL MUST PROVIDE VOCATIONAL GUIDANCE.

Almost all our discussion thus far has aimed at the more efficient conservation and education of men's powers. But a total view of the school's relation to society indicates that it has selective or distributive functions. Sooner or later, in fact soon rather than late, the school is confronted by the mental limitations of the pupil or the economic inability of the parent. The two factors are selective. They decide which children shall have further schooling of the general type which lays the foundation for the more advanced special occupations. But this distribution of students among higher schools, vocation schools, and actual occupations is done very crudely. There is an appalling waste of human ability. Able men do not find their proper work; less able individuals are thrown into responsibilities where their substantial powers are not used and where their weaknesses count heavily against them. The child out of school frequently drifts into an occupation that bears no promise for him by virtue of mere accidental opportunity or the suggestion of a fellow. Employers and even some shortsighted parents take advantage of the labor of children without being considerate of their ultimate welfare. The school must take over into its own hands more completely and more efficiently the work of vocational guidance. As the one impersonal agency, which has both individual and social welfare as its ideals, it is the safest trustee to distribute men and women to those tasks in life where their abilities will count most and their defects least.

The school of the future can not escape interesting itself scientifically in the problem of vocational guidance. Somewhere in each school system there must be established a bureau carefully organized for this purpose, and some person in every school will, under competent direction, be active in determining the life careers of youth. In this work three distinct factors must be taken into account: (1) The physical and mental capacities of the child in so far as they are revealed positively or negatively; (2) the economic capacity of the family to provide the necessary vocational education and apprenticeship; and (3) the vocational opportunities open to men and women. Whatever vocational surveys of community life are needed must be provided, and each school must establish the cooperation it requires from home and economic institutions.

The suggestions and principles here offered do not pretend to be inclusive. They represent merely the large structural changes that are needed in the development of an efficient, economical, and wholesome scheme of education. A thousand minor modifications must be made, but these will readily follow once we have committed ourselves to the few major propositions here suggested.

THE SOCIOLOGICAL VIEW.

ALBION W. SMALL.

[CIRCULAR INQUIRY.]

DEAR SIR: A committee appointed by the National Council of Education to investigate the problem of Economy of Time in Education is working on the following hypothesis: That two years may be saved in the whole period of general education, including the college, all of which may be considered as preparatory education, and that this saving of two years in the period of general education will involve no loss, if waste is stopped. Of course this merely mechanical statement of the problem does not indicate the fact that it involves the profoundest phases of the entire reorganization of American education.

PROVISIONAL TIME PLAN.

Elementary education.....	6 to 12
Secondary education (2 divisions—4 years and 2 years).....	12 to 18
College.....	18 to 20 or 16 to 20
University (graduate school and professional schools).....	20 to 24

The committee assumes that the proposition to make the high-school period 12 to 18 or 12 to 16 and the college period 18 to 20 or 16 to 20 will adjust itself in the following ways: (1) It begins high-school work at the proper time and continues it to the recognized age of college admission or of beginning life (12–18); (2) it provides for a large number who will enter vocations at 16 and adjusts itself to the idea of an intermediate industrial school (12–16); (3) it provides for the contingency that the college course in the reorganized scheme will end with the sophomore year and that the two years of college may be done in the universities or in the larger high schools, and that the colleges may make a four-year course (16 to 20), admitting from the smaller high schools at 16.

For preliminary reports and discussions of the problem of the committee, see Proceedings of the National Education Association, Cleveland meeting (1908), page 466, and San Francisco meeting (1911), page 94.

I hope you will contribute to the work of the committee by returning answers to the following questionnaire. The questions are submitted with the distinct understanding that they call merely for the individual reaction of a selected group of sociologists. The committee

wishes to know the present opinions of such a group, and will not interpret the opinions as attempts to make it appear that sociologists claim to have established a scientific basis for dogmas on the problem.

Sincerely,

ALBION W. SMALL.

QUESTIONNAIRE.

1. What is your view of the time scheme of the committee?
2. What ideals of our present civilization should fix the aims of the schools?
3. How will these aims help to make the "good citizen," who shall regard the problem of state and society, the efficient citizen?
4. Does "culture" require the present length of period of "general education"?
5. What is your idea of the proper balance between cultural and vocational studies for the welfare of society?
6. Is there a false element in "culture"—a selfishly unsocial factor?
7. What would be the effect of a shorter period of general education in correcting the ratio between an individualistic training and preparation for efficiency and service?
8. What would be the advantage to civilization of the specialized knowledge of a larger number of university men—the result of ending the preparatory period earlier? (The need of earlier specialized knowledge for a differentiating civilization).
9. What would be the advantage or disadvantage of retaining in school a large class of pupils by offering them prevocational education beginning at 12?
10. What of the economic advantage (considering those who go through the university) of entering active life while power is at its best? Of beginning to earn two years earlier?
11. What social losses would you set over against the possible economic gains referred to in 10?
12. Would an earlier beginning of university* (graduate and professional education) appeal more strongly to democracy—to secure sympathy and support?

DIGEST OF SOCIOLOGISTS' ANSWERS TO QUESTIONNAIRE.

(Number of persons addressed, 100; number of replies received, 37.)

Question I.

1. General approval—16.
 - a. Sixteen years minimum rather than average college entrance—1.
 - b. Must have four years in college—1.
 - c. Save the two years in the grades—1.
 - d. Save the two years in high school and college, not in the grades—1.
 - e. Provide for two years in kindergarten—1.
 - f. Three years high school and three years college favored—1.
 - g. Scheme favored if without loss of efficiency—2.
 - h. Save by cutting out or condensing useless subjects—4.
 - i. Make schedule to fit case—1.
2. General disapproval—1.
3. Unanswered—1.

Question II.

1. Utilitarian ideals.
 - a. Vocational, not including cultural—2.
 - b. Vocational, including cultural—4.
 - c. Democracy—5.
 - d. To make independent members of society—4.

Question II—Continued.

1. Utilitarian ideals—Continued.
 - e. Conservation—1.
 - f. Utility—2.
 - g. Efficiency—5.
 - h. Scientific—1.
 - i. Technological—1.
 - j. Adaptability—2.
 - k. Efficient citizenship—5.
 - l. Knowledge of the world—1.
2. Cultural ideals.
 - a. To fit each individual to *live*, in highest sense—3.
 - b. Self-knowledge—3.
 - c. Self-culture—1.
 - d. Self-control—1.
 - e. Strong personality—3.
 - f. Appreciation of the best things—2.
 - g. Culture in its broadest sense—1.
3. Spiritual ideals.
 - a. Self-sacrifice—1.
 - b. Service—6.
 - c. Christianity—2.
 - d. Ethical—4.
 - e. Character—1.
4. Cultural and utilitarian combined—1.
5. To improve the social environment—1.
6. Unanswered—10.

Question III.

1. By teaching the proper relation between society and the individual—12.
2. By instilling ideal of service—4.
3. By preparing the individual to meet society—9.
4. By creating a better educated class—1.
5. Answer indefinite—1.
6. Unanswered—2.
 - a. Apparently misunderstood—2.

Question IV.

1. No—20.
2. Yes, conditionally—3.
3. Equivocal—2.
 - a. "Cultural" and "vocational" interwoven—2.
 - b. Not a question of time, but of subject and treatment—1.
4. Indefinite—1.

Question V.

1. Emphasis on vocational.
 - a. Vocational contain all culture necessary—6.
 - b. Vocational longer than cultural—2.
 - c. More vocational than at present, desirable—2.
 - d. Equal division in grades, vocational emphasis in college—1.
 - e. Cultural is based on vocational—1.
 - f. Cultural 1 to 3, vocational 2 to 3—1.
 - g. Cultural 1 to 4, vocational 3 to 4—1.
2. Emphasis on cultural.
 - a. Too early specialization dangerous—1.
 - b. Cultural as long as pupil will respond—3.

Question V—Continued.

3. Equal division.
 - a. Cultural up to 14, vocational thereafter—1.
 - b. Equal division—5.
 - c. Cultural up to 16, vocational thereafter—1.
4. Cultural to precede vocational (ratio unfixed)—1.
5. Proportion to suit condition and situation—3.
6. Both should be subordinated to social service studies—1.
7. Unanswered—1.

Question VI.

1. Yes—19.
2. Yes, conditionally—4.
3. Not necessarily—5.
4. Unanswered—1.

Question VII.

1. Good effect.
 - a. Individualistic would give way to efficiency and service training—4.
 - b. Would lessen individuation—1.
 - c. Would retain children longer in school—1.
 - d. Would make a corrected ratio possible—1.
 - e. Would benefit the masses, whose education is limited—1.
 - f. Unspecified—3.
2. Bad effect—2.
3. No effect—3.
4. Doubtful—2.
5. Equivocal—2.
 - a. Change, not the period, but the basis—1.
6. Unanswered—4.
 - a. Question apparently misunderstood—4.

Question VIII.

1. Advantage.
 - a. To society at large—6.
 - b. To society through the individual—5.
 - c. Unspecified—10.
 - d. Conditionally—2.
2. Disadvantage—1.
3. No advantage—4.
4. Unanswered—1.

Question IX.

1. Advantage.
 - a. Economic—14.
 - b. Cultural—7.
 - c. Unspecified—5.
2. Disadvantage—3.
3. Unanswered—2.

Question X.

1. Advantage.
 - a. Economic—11.
 - b. Cultural—3.
 - c. Earlier marriage—6.
 - d. Moral—2.
 - e. Conditionally—3.
 - f. Unspecified—7.
2. Indefinite—2.
3. Unanswered—1.

Question XI.

1. None—18.
2. Social loss.
 - a. Economic—3.
 - b. Cultural—2.
 - c. Moral—1.
 - d. Spiritual or idealistic—1.
3. Unanswered—3.
 - a. Question apparently misunderstood—1.

Question XII.

1. Yes—22.
 - a. Possibly—1.
2. Not necessarily—2.
3. Unanswered—4.

ECONOMY IN ELEMENTARY EDUCATION.

JAMES H. VAN SICKLE.

It is generally admitted that there is waste in education. It is not denied by a single person among more than one hundred who have been consulted in the course of this inquiry that some of this waste is chargeable to elementary education. All agree that some saving of time is possible; but at this point agreement ceases, though the differences in opinion as to how the saving is to be realized do not appear too radical for ultimate reconciliation. There are those who would revolutionize the course of study from beginning to end for all pupils. There are others who would change the course materially for two groups of pupils, the highly gifted and the slow. But a majority of those consulted seem in the main to accept the course of study as it has developed, and to hope for improved conditions through elimination of nonessentials, substitutions, better teaching, and improved administrative adjustments.

It is clearly impossible to move children through the course in definite chronological age groups. The differences in mental power are too great for this, and we do not yet know enough about psychical age to use this term in speaking of groups of pupils in the various stages of education. In fixing 12 years as the age at which elementary education should end and the secondary period begin, the committee must be understood as ignoring extremes of ability and speaking only of the capable middle group of pupils. They must also be understood as accepting some clear definition of the work of grades one to six, such a definition, for instance, as that given in the Cleveland report of the committee on the six years' course of study. The six-year elementary period would concern itself with a natural period of school life, the age of childhood, whereas under the existing eight or nine grade organizations attention is divided between two problems, that of the child and that of the first years of adolescence.

One of the conspicuous causes of waste in elementary education is the attempt to give the same preparation to all, regardless of wide differences in aptitude and the character of the life to be led. Classifying the grades above the sixth as secondary will facilitate a differentiation in the upper grades which will permit some pupils to make more direct preparation for business or the industries than is now possible, while others continue to follow the more strictly academic program as far as may be necessary in preparation for managerial positions or professional life. Without accurate and detailed accounts of the results of actual trial under such an organization, positive assertions as to economy of time could not be made, yet the probability that time would thus be saved would seem strong. But enough communities have made progress in this important field to place the matter beyond the stage of mere probability. Worcester, Indianapolis (2), Baltimore (3), Lincoln, Harrisburg, and Rochester, by maintaining special classes for exceptionally capable children, have shown that it is possible for able pupils to save one year between the sixth grade and the twelfth, with other advantages to themselves besides the saving of time. As a rule we now wait until pupils have completed the work laid out for eight or nine years before permitting any definite life motive to become operative. By that time half our pupils have left us. Those who survive and enter the high school have there their first opportunity to move directly toward some definite goal. It is here proposed to create conditions favorable to the development of definite purpose two years earlier by ceasing at the seventh grade to require all pupils to follow the same course of study. It is believed that earlier differentiation of courses would lessen mortality among the slow and would result in more rapid progress among the capable. One correspondent cautions, "We can not make or produce maturity by hastening a process," and another adds, "It is a biological fact that children must have time to mature," and this is quite true, but maturity advances at different rates with different children, and any scheme of education that fails to discriminate between those who develop slowly and those who develop rapidly is not only irrational, but essentially undemocratic. The problem that must be solved before society can utilize to the full its human resources is how to make adequate provision for the rate of progress suited to varying grades and types of intellect without departing from the democratic ideal of equality of opportunity for all. Equality of opportunity and identity of opportunity are far from being equivalent terms, yet the necessity we have been under, particularly in our large cities, of educating children in "shoals" has unquestionably resulted in pushing uniform requirements too far, thereby retarding the abler pupils and discouraging the weaker ones. Our educational machinery is so adjusted that as a rule even those

pupils who are quite capable of meeting the standard of progress here advocated have little chance to do so. They can advance only as the soldier does on the march—at the pace of the army as a whole.

We are assuming in this committee that it is possible and desirable to end the college and begin the university at 20 instead of 22, thus saving two years during the whole period of education, and we readily admit the responsibility of the elementary school for a share of this saving, but in accepting 20 as the age at which the college course should be completed we have in mind the abler students, not all students. The age of 20 may be taken as properly marking the age boundary between general education and specialization for the abler students, but to hold to this criterion for all students would be equivalent to saying that only the highly gifted should attempt to climb the educational ladder as high as the college level—that only the gifted can be benefited by the higher education. This no one would think of asserting, nor would one expect the wide difference in the ages of children in any given grade in the elementary school to disappear as the same children advance into the high school and approach the college. These differences are very great. Among the children in sixth grade of any city the range of ages is all the way from 11 years for the youngest to 14 or 15 for the oldest. Some children are as mature mentally at 12 as others are at 15, and they keep the lead they have gained and even increase it if they have a fair chance to do so. They ought to have this chance, but the provision made for their unhampered progress should not deter the slower minds from entertaining college and university ambitions. Our organization should be flexible enough to accommodate itself to all whose circumstances permit them to aspire to a college education, whether their mental make-up allows them to complete a college course at the age here suggested or not. The flexibility needed for the attainment of this end should work equally to the advantage of the rapid and the slow.

After organizing elementary work on the basis of six grades, providing for suitable differentiation in the remaining grades of the present elementary period, and arranging for promotion by subject above the sixth grade, as much will have been done in the direction of time saving below the high school as can be done through improvements in organization. This, however, is not enough. Standards are lacking by which to judge results. These must be developed; and there is no better point at which to develop and apply them than at the close of the six-year elementary period. The Cleveland report on a six-year course of study makes valuable suggestions in this direction. Individual investigators, too, are striving to establish standards. Cornman's study "Spelling in the Elementary School," Stone's and Courtis's studies of the ability of pupils in arithmetic, Thorndike's

and Ayres's studies of handwriting, and the study of Standards in Composition, by Hillegas, are examples of the kind of work needed. We can not go far until we can agree upon common standards, for economy of time in education must be relative to the results which we wish to secure. It is safe to report progress in this direction, for guesswork and merely personal opinion are slowly giving place to judgments based on systematic investigation.

In determining the essentials of a course of study and adopting measures of accomplishment, there is danger that too narrow a definition of "essentials" will be adopted. Fixed knowledge of fundamental processes is no more and no less essential than mental attitude, habits of thought and emotion, and working ideals. Something more than drill is needed to get these ingrained. The selection of suitable subject matter for work and study in the grades, the organization of this material with reference to the periods when important instincts, interests, powers, and capacities become prominent, the development of desirable ideals, motives, and habits in the pupils—these things must be considered when we undertake to say what are the "essentials." What a person wants to learn, he learns quickly and easily. We waste time trying to make children learn things for which they are not ready. We should save time if by more delicate methods we sought to create in children a desire to know the things adapted to their stage of development.

Recent studies in retardation have involved the fallacy that the proper place of a child in school can be determined by age alone. What is needed to put education on a scientific basis is an examination of each child's physical state and mental power at the beginning of school life, on the results of which all the work should be based. Here again is reason for encouragement, for when we recall the rapid spread of medical inspection in our schools and recent efforts to establish a measuring scale for intelligence on a basis quite distinct from ordinary scholastic tests, it is safe to say that we are moving forward.

There has been enormous waste through poor and misdirected teaching. Some improvement has undoubtedly taken place. The work of our normal schools has not been useless. At best, however, these schools furnish but a small proportion of our teachers. They do not as a rule attract students of more than ordinary ability and culture, and they can only begin the training which these students need. In the customary two years devoted to theory and practice, a high-school graduate can not be converted into a full-fledged teacher. Both experience and after-guidance are necessary. There is enormous waste when this after-guidance is lacking. We have been accustomed to say "the teacher is the school," and this is still true, but in our cities with their large buildings and many teachers, individuality is in danger of being submerged and progressiveness

lacking stimulation. Superintendent and supervisors suggest and encourage, but their contacts with teachers are relatively infrequent. Instead of being what they would like to have it, the school will be just about what the principal makes it. It is upon the principal, therefore, that large responsibility for improvement must be placed; so in a certain sense we are justified in modifying the well-known expression, "the teacher is the school," and in saying instead, "the principal is the school." The right kind of a principal will help weed out poor teachers, will make teachers of uncertain value into good teachers, and good teachers into better teachers. One prominent cause of waste in elementary education is the existence of inertia among school principals. Soon after the position is secured there comes a tendency to settle down into an easy routine. This tendency the superintendent, county or city, must counteract, if the waste under the heading "poor teaching" is to be materially lessened. What a laboratory a school principal has, and what an opportunity for the study of educational problems! No university possesses equal facilities in this field. The principal needs to feel more keenly his responsibility as a supervisor, but responsibility is not real unless coupled with a large degree of freedom. How to secure the amount of individual initiative that is desirable in principals and teachers without impairing the unity of the school system is an important problem in school administration. Teachers associated with routine principals are apt to become routine teachers, while, on the other hand, an alert and professional-minded principal always inspires his teachers with zeal. In considering waste in education, therefore, no problem looms up larger than the preliminary and after-training of suitable principals. Given a salary that will enable the superintendent to select persons of tested strength and character for these positions, no effort is expended to better advantage in checking waste than that which the superintendent devotes to conferences with his principals. The principal can either make or mar the most carefully planned scheme, and in his hands rests the success or failure of any plans that may be formulated for economizing time in elementary education.

FROM THE CLEVELAND REPORT ON SIX-YEAR COURSE OF STUDY.

(PROCEEDINGS NATIONAL EDUCATION ASSOCIATION, 1908, PAGES 627-628.)

- I. What should be expected of pupils at the end of the sixth school year, age 12-13?
 - (a) Reading. Pupils should be able to get the thought and express the thought in simple narrative prose and poetry, such as Robinson Crusoe and Paul Revere's Ride.
 - (b) Spelling. They should be able to spell correctly 90 per cent of the words commonly used in their home and school vocabulary.
 - (c) Writing. They should be able to write legibly and with fair rapidity.
 - (d) Composition. (1) They should be able to compose and write a business or social letter, in conventional form, on a simple assigned topic that properly comes

within the experience of children of their age. (2) They should be able to compose and write short descriptions and narrative on simple themes appealing to the natural interest of children and falling within their experience.

(e) Arithmetic. (1) They should be thoroughly familiar with number combinations (1-100) in addition, subtraction, multiplication, and division. (2) They should be able to solve easy two-step problems in arithmetic involving fundamental operations. (3) They should be able to read and write readily integers and decimals to six places. (4) They should be able to solve easy one-step problems involving common and decimal fractions. (5) They should have some knowledge of percentage and its simplest applications to profit and loss and to simple interest.

(f) Geography. They should have a general knowledge of (1) the oceans and continents, their relative size and locations; (2) the principal countries, their peoples and products, with a somewhat detailed study of the United States and its possessions; (3) the great river and mountain systems, especially those of North America, South America, Europe, and Asia; (4) 50 to 100 of the principal cities of the world, their location, peculiar characteristics, commercial, industrial, and artistic features of special interest; (5) the great trade routes.

(g) Other subjects. With the aim of starting as many lines of interest as possible, pupils during the first six years should have instruction in drawing, music, morals, elementary science or nature-study, history, literature, calisthenics, constructive and illustrative handwork; but instruction in these subjects should be directed with the aim of developing habits of observation, power to think and power to do, rather than with the aim of imparting information of definite amount.

II. Suggested list of studies for pupils of the seventh and eighth grades, periods 30 minutes.

Required subjects:	Periods weekly.
English, including spelling, literature, composition, grammar.....	6-8
Arithmetic, with concrete geometry and algebra.....	5
Geography and history.....	5-7
Music.....	2
Drawing.....	2
Physical training (required of those whose physical condition needs it as corrective; optional for others).....	2
Electives:	
Manual training.....	3
Science.....	3
Foreign languages (for each one given).....	5

It will be seen that the above list presents simply suggestions from which varying courses of study may be worked out and correlated with courses now given in our high schools.

ADDITIONAL REFERENCES.

Kendall. What Modifications in Organization Are Necessary to Secure Suitable Recognition for Pupils of Varying Ability, Particularly the Ablest. Proceedings, N. E. A., 1908, p. 147.

Strayer. Age and Grade Census of Schools and Colleges. Bulletin, 1911, No. 5, U. S. Bureau of Education.

Van Sickle. Provision for Gifted Children in Public Schools. Proceedings, N. E. A., 1910, p. 155.

Same, with statistical tables, showing results within a definite period of time. Elementary School Teacher, April, 1910.

Van Sickle, Witmer, and Ayres. Provision for Exceptional Children in Public Schools. Bulletin, 1911, No. 14, U. S. Bureau of Education.

THE HIGH-SCHOOL PROBLEM.

WILLIAM H. SMILEY.

The reasons for the proposed provisional time scheme for the reorganization of American education, through which this committee believes that education in the United States can be made so efficient that two years may be saved to the individual student out of the present period devoted to general culture, for devotion to professional study, graduate school work, or business, have been so ably and fully, yet concisely, stated by the chairman, in his review of the subject presented to the National Council in 1911, that little need or can be added.

My contribution to the discussion consists in emphasizing certain phases of the subject that loom large before the secondary school-master because of the nearness and vital relationship of his work to the elementary school on the one side and to the college upon the other. I ask pardon if in anything that I may say I seem to trespass upon the field of other members of the committee. I feel sure, however, that no offense can be taken by the teacher of the elementary school at my saying that it is fair to expect of the student of the seventh and eighth grade increasing responsibility for harder work, for more independent work, and for greater power of sustained attention than at present is secured; nor by the college professor at my asking him to keep in mind that what is pedagogically right for the twelfth-grade boy of June can differ but little from that which is right for the freshman of the following September. This is saying no more than this, that the last two years of the elementary school and the first two years of the college really belong to the period of secondary education. It is not wise to treat the student as too much of a child in the last two years of the elementary school; neither is it wise to treat him as wholly a man in the first two years of college. That general cultural training should as a rule end, at the very latest, at 20, instead of at 22 as is commonly the case now, is the belief of those who have given the subject the most careful study. This is two years older than such study commonly ends in the German gymnasium, the French lycée, and the famous secondary schools of England.

Of nothing am I more profoundly convinced than I am of the inestimable value to the individual student himself, and to his country also, of his turning at the age of 20 to professional study or to business with that purposeful zeal which is characteristic of the professional student or the responsible young business man. Imagine, for a moment, the academic hosts of juniors and seniors utilizing their intellectual energies with the enthusiasm characteristic of coming doctors, lawyers, and engineers. The contrast in attitude between the two groups is generally acknowledged to be startling, and I con-

sequently have no hesitation in asserting that there had better be no academic juniors or seniors as long as this be true. The turning at the age of 20 to the preparation for one's own life task means far more than simply the saving of two of the best years of life to more efficient intellectual living, for it means added efficiency in living in all the years that are to come. There are no statistics on the college books of those that become habitual idling dilettantes between 20 and 22, but I venture to assert that there is hardly a college man who does not recall some with a more or less pitiful story of their varied attempts to find place in a society that looks with more or less impatience, if not contempt, upon the one whose acquisitions seem to have weakened his power of initiative, his apparent interest in the practical problem that duty requires him to tackle and cordial adaptability to circumstance. There should be no room in the American scheme of education for such desultory intellectual dawdling as often characterizes the junior and senior years of academic study. It may be pardoned in a genius, but he is an infinitesimal deliberately neglected in this discussion. Except for purposes of humiliating comparison in order to stir our pride, the question of accomplishing as much as any given foreign school with students of the same age ought not to enter the discussion. I desire to urge, of course, so far as I have interest or voice in this report, that we secure the greatest efficiency possible under American conditions, saving time through all grades in all the ways so fully set forth by our chairman. But, even then, no matter how far short we may fall of what the German or French or English schools may accomplish, I believe it best, both for the individual student and for the society that his ideals of work help to temper, that after the age of 20 some kind of definite life purpose shall shape his choice of work, and that it be carried on with the energy and enthusiasm that have always characterized professional study.

He who is to pursue a business career, unless he remains in college for professional specialized training in such direction, had better begin such at 20. The business man would prefer him to be younger, but at least he wants the youth while he is teachable, obedient, anxious to win success, and eager to please by hard work.

The special reasons for including within the secondary period the years of instruction from 12 to 18, as contrasted with the customary 14 to 18, or, in actual practice, the more common 15 to 19 period, are, in the opinion of the great body of teachers of secondary subjects, very weighty ones. First of all, the age of 12 seems to mark very fairly the physiological dividing line between childhood and youth. At any rate, the world over, the pedagogical wisdom of the past, as well as the more scientific pedagogical judgment of the present, agree that the best educational work can be done by a recognition of the

marked distinction between this elementary and this secondary stage in education; and that by organizing this secondary field upon the principle that it constitutes a definite whole in the life of the individual, the soundest intellectual growth results. Dr. Compayré in a discussion of the latest revised program of secondary education in France says:

The virtue of secondary teaching lies in large measure in its duration, in its slow influence upon the intellect. The best teachers need the help of time if they wish, not to furnish the memory with hastily acquired and badly digested knowledge, but to act upon the intellectual habits and to accomplish the education of the mind, which is truly the essential aim of secondary instruction.

When one sees in Germany intellectual efficiency resulting from the fact that Dr. Compayré's basis is the common one, whether it be in the old-fashioned classical gymnasium or the reformed gymnasium, or whether it be in France in the lycée or in England in the famous schools that for centuries have furnished the leaders of the nation in all the ideal activities of men, one can not fail to be impressed with the fundamental importance attached to the formation of right intellectual habits and ready use of faculties throughout this early period of education. More startling still is the suggestiveness to an American, in a gymnasium maintaining a progymnasium for boys from 6 to 9, to hear the fine work of the highest class attributed to the fact that their earliest formal instruction had been received under just the same educational conditions as their latest, in other words, that the elementary work had been finely done.

An examination of the curricula of good European secondary schools and the papers set for graduation will convince any one that at the completion of their course boys of 18 have completed work in the fundamental subjects of literature, mathematics, and science equivalent to that offered in the sophomore year of American colleges. This committee in its scheme allows a handicap of two years more than this to the American boy for the completion of equivalent work. An observer of the work of the European schoolboy is bound to ask, "How account for this evident precocity?" Many replies containing elements of truth may be made, but the fundamental reasons are startlingly obvious to the inquiring American and may be very briefly stated. The European student spends his home study in making himself facile and sure of that in which he has been carefully and accurately instructed during his class hour, while the American spends his preparatory hours in learning, too often in slovenly and inaccurate fashion, that in which he might have been instructed in but a fraction of the time, while the time of his class hour is spent in examination of the extent of his failure in learning, leaving little time for real instruction or for drill in testing the accuracy of his understanding of the matter orally presented. The con-

sequence of careful learning from the instructor at the class hour is this, that the catching of the few new points presented becomes habitual, and the class work is marked by an eager gripping attention which to the stranger is startling.

The readiness, clearness, and fullness with which difficult and sometimes involved statements are returned by students is a revelation of the possibilities of scholarly attention. Work of this character can be observed in any subject and will impress the American listener with much the same feeling of astonishment as in the times past he may have listened to rapid logical analysis by students skilled in the art of solving difficult problems in mental arithmetic.

Real and ready intellectual power of this type is the heart of worthy work in any subject, and there should be the expectation by the teacher of securing it from the earliest years, in work suited to the age of the individual. The steady accretion of skill and power from year to year will account for most of the advantage exhibited by the European student. While this, to my mind, is the strongest reason for the efficiency, at any stage, of the foreign elementary and secondary school, for the most striking result of all, the sum total of final accomplishment, there are other important considerations that deserve mention. The high standards of professional training demanded of both elementary and secondary teachers before they are allowed to teach; the homogeneous home conditions in which students live; the greater length of the school day and the school year; and the atmosphere of hard work in which everybody lives, but especially the children; these are some of the factors contributing to fine results. While the work of the schoolroom has zest and fire, there is complete absence of nervous hurry and drive; indeed, there seems to be a leisurely certainty of reaching the desired goal. One gets the impression that the getting of knowledge is the incidental thing and the student's ability to handle what he knows is the teacher's greatest concern.

The enrichment of the grammar and high-school courses of study has resulted with us in crowded programs and bulky textbooks. In much of the work abroad there is no textbook except as made from day to day by the slow extension of the student's notes, which are made with care and deliberation and most sharply supervised. The habit of formal accuracy in minutiae is acquired so early that the question of its being a hardship seems never to have arisen.

The teacher described in his "Memorials" by a shrewd Scotch judge as being "though a good man, an intense student, and filled, but rather in the memory than in the head, with knowledge, as bad a schoolmaster as it is possible to fancy," exhibits a type of scholar almost impossible to produce under the kind of instruction which Dr. Compayré has in mind, but the kind of scholar which our Euro-

pean critics believe they find to be a common product under our methods of measuring intellectual power by the quantitative ways which seem to be made preeminent in the minds of our teachers by the fact that they are emphasized as mental yardsticks for units of annual accomplishment in school program and college catalogues.

Until our teaching body is freed from its nightmare of completing subjects, or courses of study, there can be no expectation of the kind of teaching in which the emphasis is everlastingly upon thoughtful response by the student rather than upon the matter presented by the teacher. It is not an unfair criticism of much of our instruction, both elementary and secondary, to say that the panorama presented by the teacher makes hardly more impression upon the class than the moving-picture show upon its spectators.

Our problem will never be solved by the elimination of matter here and matter there which we agree to call waste. What is really wasted is the children's time when the method of instruction is such that they can escape thinking, sometimes under the guise of attention, without the teacher's discovering the real situation. The two years desired can be saved, one in the elementary and one in the secondary period; it will be done, however, if it be done, by improving the thinking as exhibited in oral or written expression in every grade. It must be understood by the teacher that knowledge of subject matter is subordinate to sharpening the correspondence between word and idea and fixing the same for ready use in future learning. The readiness of recall of the German student in any grade is amazing. He is held accountable for sharply distinguishing that which he knows from that which he does not know; not only so, but his experience is so vivid that he can recall *when* he learned what he knows. The readiness and minuteness with which he will tell a story, change a criticized word or phrase, or quote a construction similar to the one under discussion proves that we have underrated the capacity of our own students in similar regards. This method of class discipline followed through the secondary period will bring our students to the end of the same with readier use of all their intellectual powers for either study or business—in short, far better educated in the best, the true sense, though the stopping point be two years earlier than the present one.

In all this plea to recognize a secondary period of education lasting from 12 to 18, it is unnecessary to carry the associated idea of a costly high school, maintained as a separate institution. The kind of instruction that I have in mind should be given in every grade room. It may have been already begun in any building where a departmental system has been instituted for the seventh and eighth grades. For departmental teaching, if successful, demands a stronger

teacher, and possibly this is the best way of improving the present elementary instruction and thereby saving waste and securing the efficiency so unmistakably demanded by the general public.

But there must be no less than a revolution in the traditional ideal of instruction drilled by habit into the warp and woof of the teacher's brain throughout his own elementary and secondary school experience, to which he subconsciously reverts, unless he be unusual, as soon as he faces his class. There must be less of merely hearing children recite; there must be less of interesting talking, not to say lecturing, by teacher; there must be less of expressive reading without thinking on the student's part; in short, there must be everlasting matching of the student's mind and knowledge against the teacher's mind and knowledge, an interlocking of wits in old-fashioned Socratic ways, to secure education at its best.

The field of myth, of world history, of natural history, of the literature of the fatherland is covered astonishingly well in the early years of the German gymnasium; but it is perfectly plain that care is taken that information grow no faster than ready use of word correctly matching idea. Language under these conditions becomes a real gymnastic that gives daily proof of growing intellectual power; and this being so, no one has to worry about attainment on reaching the age of 18. No more would we in America, given similar instruction.

THE COLLEGE PROBLEM.¹

JAMES H. BAKER.

ECONOMY OF TIME.

Upon the subject of economy of time in education I have had the benefit of scores of opinions and experiences of active teachers fully and frankly stated. If conclusions reaffirm a value in some principles that are old enough to have a history, I beg that I may not hear the usual cheap argument of "not up-to-date." A view that does not accord with present ideas may be both retrospective and prophetic.

These criticisms are prominent: There is much waste in general education, including elementary, secondary, and college. Of the material employed little has permanent value, or indeed any value whatever, and less is retained. Of the methods used, only a small part gives power or character. Results are not proportionate to the time and expenditure, and the public are asking for shorter time, greater efficiency, and an adjustment of educational aims to real civic needs, both practical and ideal. But reform is slow. We are bound

¹ Part of a report of progress, under the title "Reorganization of American Education." National Education Association, 1911.

by traditions difficult to break. The question is complicated by all sorts of minor or inconsequent inquiries, when it should be a simple one of looking at the obvious goal and taking the direct road to it.

The first remedy is selection and elimination as applied to subjects and topics of study. The maxim of "faithfulness in small things" does not mean indiscriminate emphasis in use of the material of learning. Judgment of relative values is a chief need of the teacher. Quality, not quantity, has a new significance to-day. Knowledge and power come from the use of a few typical things by methods that beget thought; inspiration often springs from a word with a flash of insight. For instance, more would be gained by thorough understanding of a dozen chief processes in arithmetic than by any number of mechanical solutions of problems; more by using a dozen leading principles and experiments in physics than by "completing the textbook." In elementary science, method and interest are of first value. While much reading in history and literature is desirable, thought and inspiration come from a wise use of a few selections. I was introduced to Homer and to mythology by hearing an old farmer recite a passage from Pope's *Iliad*, and read Macaulay's *England* on hearing a quotation from it with appreciative comment. "Books that have helped me," and favorite poems that have inspired, are few. The essence of Stevenson is contained in a letter, an anecdote, and a prayer. Read Stevenson, of course, but study these and get them into the soul. If it is objected that this is a condensed-food theory, I reply that it is not necessary to eat the husk and shell to enjoy the milk in the coconut. Extent of ground covered as a criterion for promotion or for admission to college is the American standard of quantity applied to our education. Let the teachers, or rather the responsible superintendents and principals and leading educators, employ courage equal to their convictions, and proclaim the gospel of quality. "Enriching the curriculum" was a great idea, but it has been subject to endless abuse, and the time has come to apply the philosophy of the "simple life" to education.

The next source of economy is adapting method to the nature of the subject. The doctrine that all subjects have a like value, should be taught in the same way and produce the same results, I believe to be utterly false and everywhere harmful. It applies the methods of science to such studies as history and literature, and sanctions the "unit system" in college entrance requirements—a device convenient enough for the colleges, but destructive of any well-balanced organization of high-school courses. Subjects of prime importance whose principles have the widest application are especially fitted to cultivate accuracy, perseverance, and endurance. Others should be taught by other methods requiring less of the pupil's time and energy. Some

fields should be covered by reading, talks, and lectures with no view to examination. To repeat—time can be saved in elementary and secondary education by varying the method of instruction according to the need of the subject.

I know this involves the question of whether “general” education is theoretically possible. If we were dependent upon certain humorously artificial and inconsequent laboratory experiments on the subject, we should be in a sad case indeed. Fortunately, common-sense generalization from human experience rejects hasty inferences from inadequate experiments. It would be well, before it is too late and “general” education is reckoned among the lost arts, to send a questionnaire to the old boys and learn how many are stout in the belief that their real education came from drill in arithmetic, English grammar, Latin, and formal logic; that from these studies they gained accuracy, power of thought and expression, the detective and determining skill of the scientific method, and readiness to discover fallacies in the field of argument and of business; that their system, accuracy, and scope in practical affairs are largely due to formal training. We know that general power means nothing except as constituted by specific elements—certain ideals of method and of attainment, ways and means in study and investigation—but these do “transfer” or “spread” and cover other fields of mental effort. Moreover, general principles thoroughly grasped have endless points of contact with concrete instances; and deduction, with applications, from formulated knowledge is a chief work of general education, and is the most efficient and economical. Easy ways, infantile inductions, scatter-brained methods have become fetishes—and I am still mindful of the just claims and the beneficent features of the ruling educational doctrines.

Waste occurs in certain culture work of the grades. Too little may be left to soul development through the influence of natural surroundings. Artificial teaching of what should be spontaneous growth, imparting inspiration by rule, formulating sentiments are unpedagogical. Nature is subject to too much paternalism. Place in the time-table is not needed for many culture influences; they come, if at all, through a personality or a suggestion and are incidental to the day’s work. Many faults may be committed in the name of kindergarten and of nature study.

Other ways of economy may be merely mentioned: Avoid excessive use of rules of method; save time from the laboratory for a knowledge of the subject; for interest and motive create a vision of the value of the best things; use illustrations from the life of to-day, and in every way vitalize the work of instruction. By some means, constructive or destructive, banish lazy indifference, which was wisely regarded by the early church as a deadly sin.

The elementary and secondary periods of instruction should give the tools of education, the methods of study, the power of work, some important knowledge of selected subjects, and the desire to learn, and the ability to think. It should plant a growing sense of appreciation and a healthy philosophy of life. By the methods suggested it is believed that as much can be accomplished at 18 as now at 20, as much at 20 as now at 22, that the whole period of education, general and special, can without loss be shortened at least two years.

THE COLLEGE.

Here we reach the college and its problems. I have little patience with some criticisms aimed at culture education and the follies of college life; they are frequently the carpings of ignorance or prejudice that lead nowhere. There is reason, however, for an intelligent examination of the whole question as related to economy of time. The serious faults of the college are due to the length of the whole period of general education, and the elements of inefficiency and waste.

This country should adopt either the English or the German type of university, but not both. In foreign countries the student enters the university nominally at 18, directly from the secondary school. We interpose four years of college—largely a waste of time and method. Do not misunderstand at this point; the idea is, not to lower the standard of American education, but rather to readjust and strengthen it. It is proposed to end the college and begin the university at 20 instead of 22, thus saving two years. Of course, it is humiliating to concede that our preparatory education must be prolonged even two years to equal the standard of the English or German secondary school. But, if we may draw safe conclusions from the report of the English commission and from the Oxford experience with American students, we are lacking in thought power and perseverance—and because of methods that in part can be remedied. The university, that is the graduate school, and the last two years of college should be shaken together and reorganized into one division of education, namely, a real university, preparation for which should end at 20. Progressive university colleges have already prepared the way by approximating the last two years to the university type. The plan would eliminate the duplication between high schools and colleges, and reduce the time limit of preparatory education. It would offer university methods earlier—an immense pedagogical gain. It would have another advantage. The Ph. D. candidate now proceeds, always under careful guidance, through four years of high school, four years of college, and three or four years of graduate work. Any one whose originality and efficient power survive the test is indeed a proven man and worthy of responsibility. For the college teacher an earlier university course and subsequent

independent study, original production, and long probation would be more than a substitute for this work of supererogation now offered.

In view of such considerations the committee referred to have agreed provisionally to a time scheme as follows:

Elementary education.....	6 to 12
Secondary education (2 divisions: 4 years and 2 years).....	12 to 18
College.....	18 to 20 or 16 to 20
University (graduate school and professional schools).....	20 to 24

The tools of education can be acquired at the age of 12, and there are reasons why high-school methods should begin at about that age, when so many pupils leave the elementary schools. The division of the secondary period into four years and two years lends itself to the plan for industrial education, as will be seen later. Moreover, smaller high schools can end at 16; larger high schools at 18 or 20. Small colleges can take pupils from 16 to 20, thus maintaining a four-year course. The universities can retain two years, namely, from 18 to 20.

Let us see what are the essential consequences of this time scheme in terms of pedagogy. Many processes of mental training are easier in the earlier years. Beginning high-school methods at 12 will meet the need of pupils who at that age are restless and are seeking larger and more varied interests. Twenty is a better age to begin genuine university work than later, when the mind is less elastic, energetic, and adaptable. Elimination of useless material will stimulate the interest of pupils and result in harder and better effort—the time would be filled with important work. It lessens the period of work that to the pupil appears void of purpose. It makes a better division of time between receptive study and the larger motor activities.

Moreover, we must consider results, in view of the just claims of our civilization to-day. Educational aims must be adapted to civic needs. The history of education shows that it has always been closely related to the dominant needs and ideals of the people at any given period. There is no doubt about the public attitude to-day. The schools will be compelled so to reorganize as to meet them in the most efficient way. The proposed time scheme makes a better economic division between preparation for life and active life. It enables men to become established in life earlier and to give more of their best years to social service. It will keep a larger number in school through the elementary and preparatory period. It will eliminate waste and foolishness, and thus make more serious and efficient citizens. By introducing earlier the methods that produce power, and by selection of the fittest, the proposed reorganization of college and university will enhance the intellectual strength of the nation.

It is not intended to make the preparation of teachers a distinct part of this subject, but it can not be wholly omitted. For secondary teaching, scientific knowledge and power are the first requisites. Here

a little learning is a dangerous thing. Sound scholarship, such as only the best college and university courses can furnish, alone will remedy the weakness which foreign critics believe they discover. High schools and colleges agree that study of education must be part of the teacher's preparation. College departments of education have here a great field. They can bring the student's mind in contact with the masters of educational thought; they can use the pedagogy found in great literature—the best source of the wisdom and inspiration of teaching; they can encourage independence and originality in the acquisition and use of principles; they can conduct their work on the plane of liberal culture, and in an atmosphere of scholarship and research.

INDUSTRIALISM AND HUMANISM.

The problem of reorganization includes very distinctly vocational education, and only a beginning of the solution has been made in this country. The excellent report of the council committee last year (1910) makes unnecessary more than a summary of the situation and some suggestions on the questions involved. The material interests of the country must be promoted by the extension of commercial, industrial, technical, and trade instruction. The rights of the individual and the welfare of society require practical training leading toward useful occupations for a large class of youth whose period of education is limited. There are two views of the means of accomplishment. A large number would provide separate schools. The more conservative would relate all such work to the regular schools, select the industries emphasized in each locality, and make the training for them merely preparatory. This special work would be elective, and occupy about one-fourth of the school time. Preparatory industrial courses are placed at the age of 12 to 16; trade courses as such, leading to apprenticeships, at 16 to 18. It will be seen that the time scheme previously discussed, making the high-school period 12 to 18, with two divisions, four years and two years, readily adapts itself to these needs. Of course in large cities there are special problems calling for earlier technical preparation for various industries.

I believe that most progressive men, who represent high schools and colleges, in a general way take the affirmative of this question. They also stand for the professional and technical side of the universities. Many university colleges are "vocalionalizing" the last two years, allowing or requiring students to choose studies leading to engineering, medicine, law, teaching, business, or at least to select a particular line of culture.

But men who take a broad view can not go the entire way with the radicals. To begin industrial training before the foundation of education is laid, to teach the principles of science only as growing out of industrial needs or the applications of science without science,

to yield children to the merciless demands and economies of trade, to provide vast and expensive special equipment of every kind, when the great problem is to connect all vocational training with existing plants and actual industries, to ignore all culture and deny the possibility or value of general education—these are at least objectionable propositions. The true aim is to maintain a balance between the material and the spiritual side of our civilization and between skill and foundation principles. If there is a demand for the practical, there is also an insistent claim for the humanistic side and for profound scientific knowledge.

There are two kinds of philosophy that largely dominate the life of America—that of Bacon and that of Rousseau. We recognize the marvelous stimulation to human thought and material civilization of Bacon's influence and the beneficent humanitarian influence of Rousseau. But the misuse of the one fosters the evils of the day—worship of power, success at any cost, materialism; from the other springs the doctrine of the individual temperament with all its evils of pursuit of inclination, unwise election, easy methods, cheap amusements, and anarchy of soul. These two influences rule too much our schools and enter too much into our national life. Any reorganization of education will fail unless it is pervaded by sound pedagogy and a healthy philosophy.

I believe we must adapt to present needs the essential principles of humanism. There is not time, nor is it necessary, to go into the history of humanism, point out its virtues and faults, or make a careful definition of it. We may assume what it should mean to-day. It believes in the value of organized and transmitted knowledge, in discipline from studies, in selection of the best. It accepts and uses the best in tradition, and works on the plan of keeping civilization alive. It believes in pure ideals, in standards of excellence and character. It appreciates the importance of the higher viewpoint that shows things in their right proportion, extent of vision, the self-possession that is not swayed by mob sentiment or led astray by long discarded false doctrines. It advocates a culture that has a moral backbone. It places character above success, and wisdom above knowledge. Since humanism is interest in the lives and thoughts of men as revealed in language, literature, and history, it may include all the implications of his nature. Hence it stands for an idealism that makes of the universe a living thing, sees in it a universal will, holds as supreme some form of reverence, and a mighty faith in the affirmative side of things. Withal it stands for real progress, wise sympathy, and a democracy that gives a just opportunity for nobility of intellect and character.

There never was so great a need of an intelligent view of the place of humanism in education. Leaders of educational thought have

here their greatest work—nothing short of giving teachers and the public a sound philosophy of life, a true estimate of real culture, and the ways and means of making humanistic studies effective in education. For this high service of the teacher are needed, first, a strong personality, a cheerful outlook, an idealistic view, a power of appreciation; second, a knowledge of the means of education for power, of vital moral training, of imparting inspiration by the deeds and thoughts of men. This view is not an argument for classics, only for the principles of humanistic study; it does not neglect science or industry; it endeavors to maintain a proper balance in education. The people demand that the spiritual side shall find a place in our schools and in our national life, and any scheme of reorganization must reckon with the fact.

I know the ethical significance of science and of industry; they give society a kind of material moral backbone. But many mechanical occupations require morals more than skill. As machinery more and more does the work of the world, the demand for responsibility will increase the sense of duty that prevents waste and loss and accidents. The lack of efficiency in most industries and professions, when it is not a lack in foundation education, is largely moral. Humanism regards not the work only, but man's attitude toward it. The business world will make a fearful economic mistake if it insists on making of youth machines instead of men.

SOME OPINIONS ON THE COLLEGE PROBLEM.

A copy of the preceding paper was sent to the presidents of American universities, asking a reply especially upon the main question of ending the period of general education at about 20. The following extracts from replies are valuable contributions to the subject:

President Nicholas Murray Butler.—In my judgment the college course can, and should, be completed when the normal student is 20 years of age. The reason that it is not now completed at that point is, in my judgment, due to poor organization of elementary and secondary education, to wasteful methods of teaching, and to lack of cooperation between home and school.

President Benjamin I. Wheeler.—I think it is in the highest degree desirable that what we call secondary education should reach down and take the two upper grades of the elementary schools. There are two reasons for this: First, these two upper years, having been occupied in the first place by merely formal expansion, are filled now with sawdust; secondly, 14 is too late to begin the acquiring of the first foreign language. There should be added also, I think, the consideration that industrial training should begin not later than 12. Students should enter college at about 16. They must not be allowed, however, to launch out into the muddy sea of free election. The

first two years must have a suitable organized curriculum; the break should come at the age of 18, between sophomore and junior year. I am persuaded that the long-drawn-out series of years which we have put into our career for the Ph. D. is a mistake. After a man passes the age of 18 he ought to hurry fast toward his goal; prior to that he ought to go slow. This is why the barrier ought to be at the end of the sophomore year; the barrier must be there to prevent the flood of free election from washing away all the landmarks of requirement.

President Charles R. Van Hise.—So far as my experience goes it is in accord with the division of years proposed for the different lines of work in your article which you send me. The only qualification which I would make is that this is a scheme for persons who have sufficient ability to take advantage of college or university work, and with the understanding that they remain continuously in school.

President A. Ross Hill.—I believe it to be entirely feasible to save two years in the course of our cultural or general education in this country, and thus to make it possible to establish real universities. You will be interested to know, if you havenot already noted it, that with the opening of the university this fall we require the first two years of the arts and science course for admission to any professional or technical school. This is the natural sequence to a step taken here about five years ago in requiring general training for freshmen and sophomores, specialization of juniors and seniors in the college of arts and science. It will not be long, I believe, until we will be viewing the first two years of work as a virtual preparatory department. We have gotten a few large high schools in the State to add a fifth year, and we shall soon have them maintaining two years of what they will regard as a sort of graduate work in the high school. This situation, however, does not in itself bring about the economy of time aimed at by you. That reorganization must come chiefly, I believe, in the elementary school, which the pupil should leave at about 12 years of age.

President Charles O. Mercia.—In the matter of reorganization with reference to the time element, it seems to me that, if you do not speak the last word, you at least speak words that can lead logically only to the last word upon this subject. We Americans have been so afraid of not being thought original that we have sometimes suffered loss by our unwillingness to copy. It is too bad we have not profited more than we have by our knowledge of the organization of the German primary and secondary schools and universities. When you apply this discussion of the time element to industrialism, I also quite agree with you as to the general principle. However, I do not admit that because a subject has a vocational trend its study loses all cultural value and also entirely fails to contribute to mental growth. I am, however, willing to admit that as vocational subjects are usually taught they add only to our stock of tools. If we were

better prepared to teach these subjects properly, we might not need to make this differentiation. However, as I said, it seems to be pretty clear that up to a certain point of growth, the age of 20 or thereabout, those subjects should be pursued which contribute most largely to mental growth and which introduce one best to the world of human interests. On the other hand, I do not believe that it is going to be possible to ignore the tremendous demand for so-called secondary technical instruction. I believe that an immediate problem will be how to answer this demand and still save your general scheme.

President Arthur H. Wilde.—I am in hearty accord with your general statement. I believe that men should finish the ordinary college course by the time they are 20 years of age and be prepared either for business, some other occupation, or for graduate work. One saving of time might be made in the college course, where there is great loss from dissipation of time and energy by the ordinary college student. It would not be at all difficult to shorten the time spent in a good high school and good college by a strong student. It appears to me that we ought to be adjusting our work rather to the ambitious student than to the unambitious or mediocre student.

President David Starr Jordan.—I quite agree with the main features.

President A. Lawrence Lowell.—I agree with you entirely that the pace is too slow in our education and the age is too old. As a friend of mine remarked, I think the trouble begins in the nursery. It is the habit now to begin several years too late, and frequently children are sent to kindergarten at an age when they ought to have finished that and begun the primary. These years are never made up. On the other hand, I do not wholly agree with what you say about the college. I believe that four years in college, for those who can afford the time and use it properly, is perhaps the most valuable part of education, and on the other hand I think that the atmosphere of the high school is not the best to develop full-grown faculties. I should like to see boys leave the high school at 17 and college at 21.

President Arthur T. Hadley.—Why must we make definite choice between the English and the German systems? The English system prepares for public service, and does it well. The German system prepares for professional efficiency, and does this well. Why can not we prepare for both? It seems to me that it is far more important that we should continue to do the things that we do, however imperfectly, in preparation both for public and for private service, than to attempt to have everybody alike. My general judgment of the plan, therefore, would be that if we had to standardize in any form, your plan probably represents the direction in which we could go with the least harm, but I am not convinced of the wisdom of attempting to make everybody alike in this matter just yet.

APPENDIX.

PRELIMINARY REPORT ON NEED OF INVESTIGATION OF THE CULTURE ELEMENT AND ECONOMY OF TIME IN EDUCATION.

JAMES H. BAKER.

(A) INTRODUCTION.

In 1903 at the Boston meeting of the National Education Association a committee was appointed in the Council of Education to report upon the desirability of an investigation of "The Culture Element and Economy of Time in Education." This committee, as a committee, has never reported, beyond suggesting two or three topics for investigation. The subject was revived at the 1907 meeting of the council, and the writer was asked by the president to make a preliminary report upon it. It is to be remembered that this is not even a preliminary report of an investigation, but a preliminary report upon its desirability—an examination of the field to see if treasure is contained within its limits.

I am aware of the limitations to the value of the questionnaire as well as of its proper uses, and it has its uses. When such an investigation as this is proposed the first step is to seek experiences, facts, opinions, and tendencies, as concerns the subject, and I believe unusually rich returns have been secured in this instance.

I sent out several hundred copies of a circular inquiry to men carefully selected among the following: Presidents of universities; professors of education; superintendents of schools and principals of high schools; sociologists and business men. Eighty replies were returned. The number of replies from each group is in the order of the groups named, few being received from sociologists and business men, although a second special inquiry was sent them.

The questions, a summary of the opinions, classified extracts, references to articles, experiments, and investigations, and a valuable additional bibliography, furnished for this report by the National Bureau of Education, are submitted. The questions were made as searching as possible for the general view to be obtained. The replies as a whole show exceptional knowledge, conscientiousness, and interest on the part of the writers, and very little perfunctory work or mere disposition to find fault appearing.

I think I may here present a general impression of the whole, before calling attention to the questions and summaries.

The first impression is that there is real and widespread dissatisfaction with the results of education, especially as related to the time expended; that there is a growing consciousness of the need of adjustment to new ideals; that there is a demand for reinvestigation and reorganization. The people are ready for the leadership of any representative body that will attempt to reduce to some degree of order educational theories, methods, and standards. It is a surprise to me to learn that two-thirds of the correspondents believe the period of formal education should be shortened and that very many would place the age-limit at 24 or earlier. All ask for a shorter limit, or better results for the time, or both. They recognize that since the early

New England college, education has added eight years, the high school has taken the place of the college, four years have been set apart for the higher degrees; that the college to-day occupies an anomalous position, without a well-defined function; that each unit of the system is yearly increasing its demands; that quantity is the ideal rather than quality. There is a disposition to call a halt along all the line and have an inspection. There is also a strong sentiment that culture must be redefined, that it covers much of the field which formerly was regarded as exclusively practical. The waste of time in elementary education, the need of reforms in secondary education, the need of definition of the college and of its relation to the professional school are emphasized with substantial reasons assigned. I was doubtful about the value of the question relating educational aims to social needs, but much wisdom is shown in the replies and a majority claim that real culture will not suffer if we pay reasonable attention to efficiency and economy of time. The last question asking for summary views upon the whole problem of the organization of education in this country brings out many valuable suggestions.

There is nearly unanimity of opinion that much time is wasted in elementary education, and a large majority claim that the time should be shortened. That there are too many odds and ends, topics and subjects, is a common criticism, the teaching and the lack of knowledge of ends aimed at having their share. Time can be saved by making a distinction between first-rate and tenth-rate facts; not trying to teach everything that is good; limiting the work to the tools of education; teaching content studies differently from the method in formal subjects; keeping educational aims in view. Upon the whole, the judgment regarding vocation studies in the elementary schools is conservative and good. A striking suggestion is to provide studies which take the place of the work children formerly did with their parents in the home, on the farm, or in the shop.

A majority favor a change of the high-school period, the preference being for 12 to 18. Some advocate two divisions only for the dominantly cultural education, since a distinction between the aims of the high school and of the liberal college does not exist. Important reforms in the high school are freely proposed by nearly all. Amongst these are simplifying the courses, efficiency in character-making, directing the work toward well-defined ends, improving the teaching. I believe that, as noted under elementary education, some subjects should be presented in a way to invite and inspire, and not for formal discipline, and that they should require little preparation. No greater mistake has been made in recent years than using the same rigid method for all studies. This practice is based on an exploded doctrine that attained great dignity a few years ago. Many people thank their stars that they did not get their literature and history in the modern elementary and secondary school. Vocational needs are generally recognized, and various schemes are offered for providing practical courses. A typical scheme is grouped electives leading in practical directions, and offered in connection with the regular high school.

The length of the college course is put by the most at four years, but this is done by those who believe college entrance should be much earlier, and by those who would begin university work with the junior year, as well as by those who would preserve the college intact. Evidently they would first make a readjustment of the college and the professional school in accord with present tendencies, and leave for a later solution the less important problem of requirements for the A. B. degree. And here is the most significant fact of the whole report: One-half of the correspondents would have university work begin at the junior year—work that gives scientific power—with groups leading to the various professional degrees or the Ph. D. degree, the last two years counting toward those degrees; and would complete the professional work or Ph. D. work in two years more, or six years after college entrance. One great university has already advertised substantially such a plan. In the independent recommendations for reorganizing the college are some interesting plans;

this voices the sentiment of many: "I would thoroughly reconstruct the American college from top to bottom, for it retains its name, having lost its character." They do not shrink from specifying the kinds of reform. One would adapt the college to the years 16, 17, 18, and 19. A few point out what business men really appreciate in the college graduate: The subjects of study, activities, moral and physico-moral qualities, practical traits, and show wherein the college as now organized fails to meet the demand.

The logical order of this inquiry may not appear at a glance; the time element is related to the culture element, and the culture element in turn is related to the needs and ideals of society to-day. At different times many educators have expressed to me the belief that relating the inquiry as above is a hopeless and profitless undertaking. However, I am unable to see how a thorough investigation of American education could fail to connect aims with needs. The history of education can be understood only in connection with the history of civilization, the conditions, needs and dominant thought of different eras. We can not understand our problem unless we study our educational aims as related to our civic needs—the time, means, and methods—in view of results. Germany has had the wisdom to do this, and aims its instruction toward service to state and society. I wonder whether we shall not yet reexamine Persian, Spartan, and Roman, as well as Athenian education, and learn many things to our advantage. I wish to add here that, to the end proposed above, educators must throw light on their problem from public opinion when formulated and expressed by intelligent representatives. What are the needs of society to-day? If one may believe the "crowd of witnesses," they are, in plain terms, *efficiency, real culture, and responsible character*—nothing new, but peculiarly our needs at the present time, and the schools are not giving the people satisfactory results. These three demands of real life suggest the weakness of our education and the ideals to be emphasized. Nothing is changing so radically as the definition of culture, and this is shown in the replies to the fifth topic on the relation of the subject to the demands of business and society and the ideals of our civilization. All agree that smattering, however extended, is not culture, and that one may possibly cover the eight years of high school and college and not get an atom of culture. Culture, in my mind, is the insight and inspiration from knowledge; it is closely related to efficiency and character. People are demanding that young men be made ready for life, and that they be trained in a character that will stand modern tests, and that they shall gain real culture and not the mere show of it. I refer to the extended "Extracts" (p. 63) upon this subject as well worth reading.

The topic asking for summary views on the organization of education in the United States gives much freedom and scope, and the answers are suggestive in many directions. The replies may be summed up under the heads: Modifications of the school system; organization of the system; vocation element in education; preparation of teachers; educational aims; means of educational progress, etc. Some believe we are now nearly ready for the German plan. The need of eliminating comparatively valueless material throughout is emphasized. Great stress is placed upon organization, National and State, and the need of some central power or representative body that shall unify and standardize and shall make use of discovery and the various means of progress. There is a general recognition of the need of practical studies throughout the school system, "branching off at different points from the central line of general culture." I have never seen more strongly emphasized the demand for forceful, wise, inspiring teaching, and this is not the only recent powerful expression of the same idea. The connection between means and the ends to be reached are duly discussed. The faults of election, the superficial quality of our education, the need of solidarity in our system, an interesting paragraph from Prof. James on "Motor education," the importance of recording school experiences and providing means of interpretation in a central bureau are found in the list.

We are slow to adopt new ideas, and the views here represented will not be welcome to all teachers and professors. But I see nothing in all the tendencies noted which will not strengthen education and dignify the position and work of the teacher and the professor. In a scheme of readjustment most college departments in universities (which now in spirit and in method are largely high-school departments) would become of university grade. Moreover, the scheme would include the ways and means to develop productive scholarship in this country. I recommend strongly a careful reading of the "Extracts," including the "Questions and Summaries," for they are a compilation of up-to-date material of rich value upon the greatest present problems of education.

It must be understood that this is not a report; this is not the stage for it, and I have not presented many of my own views. I have given a summary of the returns to an inquiry. I am convinced that the conditions warrant an investigation, and under auspices of this body. The work should relate the time element to culture and culture to social needs. Vocational training should be a part of the investigation, and also the question of organization of the educational system; indeed these are now a necessary part of the original subject. As to the things to be investigated, there is enough wisdom in the views already compiled; as to the methods of investigation, a properly selected committee will find its own ways. If this work is to be pursued by this council, a committee should be appointed ably representing elementary education, the secondary, the collegiate and university, the field of social science and of the science of education. Such a committee should enter upon a thorough investigation along the lines already marked out, cooperate with other national organizations that may be pursuing similar inquiries, formulate results, and unite in a final report with practical recommendations. This report is so much material for the work of such a committee.

(B) QUESTIONS, SUMMARIES, EXTRACTS.¹

QUESTIONS:

- 1 (a) *At what age should formal general and special education end, as normally marked out for attaining a professional degree or the Ph.D. degree?*
- (b) *If the entire period of general and special education should be shortened, where should time be saved?*

SUMMARY:

1 (a) Two-thirds would shorten the period of formal general and special education, and nearly half of all the replies name the age limit as 24 years or earlier.

1 (b) If the time is to be shortened, the order of preference is as follows: "All along;" in the elementary school and the high school; in the elementary school and the college; in the elementary school; in the college; in the high school and the college; in the college and the professional school. More than half of these preferences include the elementary period, and more than half include the college.

EXTRACTS:

1 (a).

"It is rather difficult to name an age. I should think that all the work of the elementary, secondary, general collegiate work, and the work for the Ph.D. and professional degrees should end when the normal pupil who has had no interruption is 20 years old. An intelligent scheme of this kind would result, I sincerely believe, in a much higher average of intelligence for the sum total of humanity. It would not interfere with the geniuses going on and no doubt would result in the discovery of many more able and valuable men and women."

¹ See Extracts, Condensed and Rearranged, p. 86.

"My figures require a shortening of the time, inasmuch as the medium age of graduation from American colleges is at present 22 years and 10 months, and the requirement in advance of it is three or four years. In my opinion this much time should be saved by rapid promotions throughout the elementary school system, by flexibility in the high-school course, and by similar flexibility within our present college course. If these measures should not suffice, it would seem better to me to sacrifice the length of the college course rather than that of the professional course."

"The great objection to our present condition is not so much that too much time is spent in studying for a profession or for life in general, but rather that the purely preparation stage is too long extended. With this objection I agree, and I think that the ultimate solution will involve, in the later stages of education, a combination of practical work, producing income, and along the lines of the profession studied, with systematic study leading to the professional degree. The period would in consequence not so much be shortened as modified."

"I think that education given by actual contact with the world should begin somewhat earlier than now, assuming that it does generally begin now about the twenty-fifth anniversary of the birthday."

"Less and less will the prospective lawyer study biology and the prospective physician constitutional history. The engineer will not study Latin, nor will the prospective teacher of modern languages study physics and chemistry. Two things we know to be true: Any of the traditional subjects of general education may be made a highly selective agency in determining ability for the professions; and, in professional preparation, the demand is steadily increasing. By means of alternative courses, high-school work should begin a general preparation for the professions."

"Dawdling and dissipation of thought must be avoided. If concentration and thoroughness are maintained, the time element is relative to circumstances of students, with the general principle that the more complete the foundation the better."

"The complete course of preparation contemplates the students who are preparing for the most complex and responsible positions in life. I think the ripening of a student's powers and his maturing are as important for such a career as the definite facts that he gathers in the course, or even the definite training that is mapped out for him."

"I am quite skeptical of the value of the Ph. D. degree to men under 30."

1 (b).

"It would be well to have students enter college at about 16; to complete four years of carefully graded work under good instructors and in small groups, and then at 20, or the end of our present sophomore year, go on to the university, which should treat subjects from a technical, professional, and research basis, requiring the two years now called freshman and sophomore for entrance. It is a pity that A. B. has been advanced two years in quantity since 1880, rather than in quality."

"If the first two years of the American college undergraduate course were recognized as a continuation of the student's secondary education, and these two years were combined with the high-school course as a general culture preparation for life and for later professional study, our young men could dispense with the upper half of the undergraduate course and pass at once to their professional training."

"I believe that time should be saved throughout by less attention to details, lengthening a little perhaps by more attention to generalizations."

"The strong student should be permitted to shorten the time. Time should not be the chief element of consideration. Quantity and quality of work should determine the question of degrees."

"I should say that, if a degree, especially the baccalaureate degree, represents ability and attainment, and not merely time spent, then time could be saved in the college by the strong, able, and ambitious."

"The high school suffers directly by the hyperconscious effort to prepare for some studies above. I believe we would get better college preparation if the high schools were utterly to forget it."

"I question first the advisability of endeavoring to shorten the entire period of general and special education. Our civilization is becoming more and more complex."

QUESTIONS:

- 2 (a) *Is there important waste of time in elementary education?*
 (b) *Should the period of elementary education be shortened? Where and how?*
 (c) *What provision should be made in this period for "vocation" schools or studies? How?*
 (d) *Please refer to experiments in this country or elsewhere to shorten the period of elementary education; to articles, papers, etc., bearing upon the subject, or organizations that are investigating any phase of it.*

SUMMARY:

- 2 (a) Five-sixths say time is wasted.
 2 (b) Two-thirds think time should be shortened.
 2 (c) Less than one-third favor vocation studies in the grades.

EXTRACTS:

2 (a).

"There is a deplorable scattering of pupil-resources, where concentration ought to be the constant aim. It is easily perceivable now why private tutoring (high grade) furnishes the best opportunity which comes to children—all the 'red tape' is shorn off. Shorten it by at least a year without hesitation—at the end next the high school—and by conserving energies now hopelessly expended upon nonessentials."

"I think so, especially in routine practice in some studies and in diversions from study, odds and ends, 'fads and frills' generally."

"Yes, in covering unimportant and unpractical topics. The enrichment of our courses of study is a good thing, but it must be accompanied by a corresponding elimination of topics (not subjects) which are more or less unimportant, in order to insure efficiency."

"There is an important and lamentable waste of time, in elementary education, as in all other stages of education, in this country at the present time. Among the causes are: Poor teaching, poor textbooks, needless multiplication of the subjects taught, lack of continuity in its grades, such that new personalities and new methods, as the pupils advance, result in undoing what has already been done and producing confusion rather than progress. The only remedy is the improvement of the personality of the teaching body, and a spirit of enlightened harmony regarding the ideals at which education aims."

"Waste in the elementary school, on account of the lack of great, strong, enthusiastic, educated teachers."

"I believe there is; in the form of unmotivated and ineffective reading, writing, arithmetic, and geography."

"One of the greatest sources of waste in the grades is due to lack of medical inspection of school children."

"I am inclined to think the technical schools can be justified when they say they get as good results as traditional schools in conventional subjects, besides their technical work and because of it. I suspect present results could be had in half the time now taken."

"The present-day enrichment of the curriculum has introduced much that is necessary and important, and in order to cover, with the drill and reviews absolutely essential, all the ground now necessary, even more time than is now occupied could be used to advantage."

2 (b).

"It should be six years instead of eight. It seems to me more could be done than is now done the first six years of school life. This could be secured by a more careful pruning of the elementary program of studies, a saner correlation, etc."

"The period of elementary education should be shortened by introducing the secondary school work in the higher grades."

"By some plan similar to that of Cambridge, the so-called double-track scheme; or by separating the brighter pupils and ambitious boys who are destined to a pro-

fession and placing them in separate grammar schools at age of 9 or 10, where concentration and continuous progress are possible; also by a closer articulation of high school and grammar school."

"Yes. In accordance with the individual. By a more scientific adjustment, as the fruits of child study, of the studies to the development of the individual. Emphatically far less time set out for formal reviews. By sticking to the elements of the subject. By application to the doctrine of apperception. By following social and concrete interests."

"Yes. By fitting the course of study to the individual. A large number of children can easily complete the grade work in six or seven years, others need nine or ten."

"Grades 1 to 6 might be shortened: (1) Prune and vitalize subject matter; (2) reduce size of classes; (3) improve teacher both 'methodically' and inspirationally; (4) reduce lay control of the school—make teachers and principals more independent."

"By a course of study implying a more vitalizing content and a more varied and expensive procedure. The present plan of procedure and mere textbook instruction, inside four walls, is the easiest and cheapest possible, but not the best obtainable. Cast out much worthless rubbish; make the clear distinction, all the way through, between first-rate facts and principles and tenth-rate—a distinction which is not always known or made by the teachers now employed generally."

"By more elastic classification, more attention to the individual, and teaching that is more direct and positive."

"By some omissions, but chiefly by better teaching and by getting children to see the relations of what they are doing to ends that they desire to reach."

"Yes. By not trying to teach everything that is good. Select the best and do the work thoroughly; also use industrial or manual training to vitalize academic instruction."

"Time could be saved on geography and arithmetic and reading."

"Yes. By omission of parts of arithmetic, grammar, and physiology, by better correlations and by better teaching. The drill work could be shortened greatly, if it were better conducted. Much more could be accomplished in the content studies if the teachers did not teach them with the method suitable to the formal subjects."

"Geography can be cut in the middle, arithmetic can be largely curtailed, and many other studies can be treated in like manner. One of the things in school that we mistake is to take the natural development of the child for the work of the schools."

"Yes. Very much less work should be done in arithmetic. The shortening process would be aided by the adoption of the metric system. But even without this adoption, we are at present spending a third more time than is necessary. Time could be saved, also, by dropping much of our technical English grammar and putting in a foreign language. There is also great waste in teaching geography, and the military and political details in history. In general, our courses of study need to be remodeled in the interest of better pedagogy."

"The boy and the girl could spend time outside the ordinary school and learn many useful things and then accomplish as much in the common branches of learning taught in the primary schools as by going to school all the time."

"It seems to me that the period of elementary education should be confined to the mastery of the tools of education—that is, during this period the emphasis should be placed upon this phase of the work. For pupils who do not wish to prepare for high-school work, certain kinds of manual work could be advantageously offered during the seventh and eighth years in place of technical grammar and some parts of arithmetic. Those who plan to enter the high school could advantageously begin the study of foreign language, elementary algebra, constructive geometry and elementary science so that they could finish the work of the high-school course one or two years earlier than is customary under existing conditions."

"I think two years might be given to the high school if the high school could be depended upon to cease being preparatory and begin to be liberal at the very beginning of these added years, using departmental methods and meeting the appetite for information while it 'let up' for the present on the elementary school effort at training. Then the high school might well enrich its curriculum, putting less pressure on

thoroughness (by which it means a protracted term of years on a subject). Then a certain type of election of studies, in which parents might be enlisted to help discover tastes and interests, would be more in place here than even in the college."

"I do not think it will be wise to attempt to shorten this period, but the work should be enriched, the school day should be shorter, and the children should be given an opportunity to put into practical application in the home and elsewhere the lessons learned in the school."

"The period of elementary education should not be shortened, but should be differentiated, so that provision could be offered to those manifestly going to high school and college, as well as to those terminating their school careers at 14."

"Since the thoroughness attained ought to increase, as the complexity and variety of subjects 'dabbled in' are diminished, if by 'elementary education' be meant all that precedes the high school, I do not see how the time can be shortened. But at the same time there might be much more of education with much less of cramming."

"I could refer you to places where there is a positive public demand for lengthening it."

"Instead of dividing the period of elementary education into 8 (or 16) annual (or semiannual) classes, with a separate teacher for each step, it would be more rational to have three divisions: (1) Play school, for children from 5 or 6 to 7 or 8 years of age; (2) primary transition, for children from 7 or 8 to about 9; (3) elementary school proper, for children from 9 or 10 to about 13. (The same teacher should have charge of a group of children throughout the whole of one of these divisions.) These three classes should be followed up by a (4) secondary transition class of a year, introductory to the high-school work proper, during which, for one or two periods a day, the less well-prepared pupils could review such fundamentals as constructive English and arithmetic. The length of time in the primary transition class should vary with the physical and mental development of the child, and this variation, especially, will give elasticity to the length of the school course, which probably should not average more than seven years up to the secondary transition year. There should for the individual pupil be elasticity as to the time spent in any class. No pupil should remain in the elementary school after puberty."

2 (c).

"Throughout the elementary school proper there should be systematic manual training, and there should be provision (of from one-sixth to one-fourth of the time the child is capable of devoting each week to education work) for the pursuit of some elective interest additional to those prescribed for all pupils. This might be the study of music (piano, violin, or some other instrument) or might be devoted to the acquisition of some gainful trade, although I should deprecate this under normal conditions. This time might be spent out of the public school or might in some cases be made a part of a rich school's work."

"There should be some form of vocation schools or studies which take the place of the work children formerly did with their parents in the home, on the farm, or in the shop. As much as possible there should be a return to this old-time home cooperation."

"I believe that practically all the subjects of the elementary school should have a greater emphasis upon practical aspects."

"Public education has not covered its legitimate field until it includes provision for special instruction along vocational lines."

"This is one of the most difficult questions for the modern educator to meet. I see no better way than to keep an eight-year elementary course for this purpose, putting in manual training, elements of commercial practice, etc. To prevent class distinctions the first three, perhaps four years, of this course should be identical with the six-year elementary course."

"Provision should be made for those boys and girls who upon reaching the compulsory age limit wish to take up preparatory work for some trade. Vocational schools should be provided for such boys and girls. Of course the best results would follow from a close alliance between the shop and the school. Until such alliance is brought about, the vocational school can never attain a high degree of success. If the shop furnishes an opportunity for practical work, and the school gives the theoretical side in a simple and direct way, in such studies as arithmetic, reading, spelling, penmanship

and especially free-hand and mechanical drawing, the course will be effective, not only on the side of discipline, but on the side of practical preparation for life work."

"There should be vocational training for defective and irregular pupils, who for these and other causes are over age."

"The faults in the present system are due, as I see them, in quite a measure to our reluctance to recognize any distinction in school children on any grounds whatsoever."

"After pupils have reached the age of 14, special industrial continuation or improvement schools should be provided for those who do not care to continue in the old line academic work. These schools should offer the following courses: (1) Four-year trade course; (2) two-year course, preparatory to the trades; (3) part-time course, afternoon or evening, preferably afternoon, for those who must become wage earners at 14."

"There is much to be said for the idea of the vocation school, but it is at present in public education a thing that can not come. We must first convert our legislatures and our boards of education, and next our teachers. Within one year, I have visited the schools in 23 different large cities, and I confess complete disheartenment in respect to further development in many of them. We need to do in fact what we are supposed to be doing. Or rather, we need moderate reform in uniform standard work before we undertake vocational schooling."

"All should be discouraged against learning the trades at this time."

"We can and should improve our curricula by including more vocational work, but this must be done through persons and not merely on paper. Moreover, the vocational director must be not only carpenter or cook or plumber or dressmaker but also a thorough teacher. There are almost no such persons at present alive in America."

"I have directly in mind the oral and confidential testimony of the teachers in—— schools, where the seven-grade system is in vogue. Their testimony is almost universal that their seven-grade system saves no time."

2 (d).

References are made to Kansas City, Birmingham, Nashville, Springfield, Worcester, Cambridge, Batavia, Decatur, East Orange, N. J., Bethlehem, Pa., Wurttemberg, Germany, and several places in France; also to the Boston Latin School, the Baltimore Preparatory School.

References on the whole subject are made as follows: Annual Reports, Columbia University, 1902, p. 37; 1903, pp. 23, 29, 31; 1904, p. 17; 1905, p. 11; 1907, p. 20. Columbia University Quarterly, Vol. V (1902-3), p. 133; Vol. VII (1904-5), p. 267.

Other references are articles by the United States Commissioner of Education; and in *Educational Review*; *Education*; *Journal of Pedagogy*; *School Review*; *Yearbooks* of the National Society for the Scientific Study of Education; *Report* of Committee of Associated Harvard Clubs, address R. G. Brown, 1006 Guaranty Building, Minneapolis, Minn.; *Proceedings* of the N. E. A. (1903), pp. 217-322; (1906), pp. 108-112; (1907), pp. 705-710; (1903), pp. 322-327; (1904), pp. 194-202; paper by Principal Coy, Cincinnati, meeting of Department of Superintendents of N. E. A.; address of Dr. A. S. Draper, December 27, 1907, before Academic Principals' Association; address in *Proceedings* of South Dakota Educational Association; "Can School Programs be Shortened and Enriched," "An Average Massachusetts Grammar School," "Shortening and Enriching the Grammar-School Course," "The Grammar School of the Future," by Charles W. Eliot in *Educational Reform*; *Education*, May, 1907, pp. 550-555; "Attempted Improvement in the Course of Study" in *Educational Aims and Educational Views*, by Prof. Hanus; "As Concerns Secondary Education," in *The Educational Situation*, by John Dewey "Experiment in Brooklyn," address Charles S. Hartwell, 473 Madison Street, Brooklyn, N. Y.

QUESTIONS:

3 (a) Should the high-school period be shortened or should it be extended in either direction?

(b) Should it be six years—from 12 to 18, or 14 to 20?

(c) Are important reforms needed in high-school education? What?

(d) Should provision be made in this period for "vocation" schools or studies? How?

(e) Please refer to important experiments in this country or elsewhere, and to articles or papers bearing upon the subject, and investigations now being made.

SUMMARY:

- 3 (a) A majority favor a change of the high-school period.
- 3 (b) A majority of these choose the period 12-18, a less number 14-20, and a few 12-16.
- 3 (c) Nearly all think important reforms are needed.
- 3 (d) The replies are practically unanimous in favor of vocation schools or studies.

EXTRACTS:

3 (a).

"The high-school period should reach to 18, and should actually be six years, for there is no need in having separate schools for children from 12 to 14, for simply a differentiation of the work of the last two grades of the elementary school, and a departmental system of teaching already quite common, will accomplish every end and preserve somewhat the democratic character of the school."

3 (b).

"At 12 specialization should begin either for vocation or for college."

"My belief is that the threefold division of the cultural part of education, with elementary, secondary, and higher, is due to accidental historical conditions and that only two divisions of education that is dominantly cultural should exist—elementary and higher. At present the distinction between the aims of the high school and liberal college does not exist; the high school is merely a poor college—the 'people's' college. The high school might give a fairly complete liberal preparation for life, leaving the individual at 20 ready to enter a professional course."

3 (c).

"More 'training for character.' Less of the purely 'bookish elements.' Stronger men in high-school faculties. Better textbooks."

"Reforms in high-school education should be based on the realization of the fact that it is the period of inspiration and the formation of ideals. The teaching should be such as to enable the pupils to arrive at a few great generalizations and to apply them in the broadest way possible in the things of life."

"We need more thoroughness, initiative, and moral emphasis. There is too much imitation and too little reflection developed. From the grades on, the great effort should be to teach thinking and self-reliance."

"Yes. The work should be made more functional, less textbook, and the work should grow out of the lives of the pupils and back into their lives."

"Treat every child as a personality. Let nature cut her capers under proper guidance. It is a crime to demand that all children shall be alike—which means like the weakest child and weakest teacher."

"More training for life, citizenship, vocation, and service. Some freedom of election should be provided in the last two years and opportunities given in appropriate schools or departments for the student to take a classical, a general scientific, a commercial, a domestic-economy, a manual-training, or a technical course. Continuation or night schools should provide special commercial and technical training, as well as the literary course, for those boys and girls who are compelled to drop out at the end of the grammar school or earlier. Our system neglects this great class of young people. We should make as thorough provision for their needs as for those who are able to go to high school and should do everything to induce them to take these courses for six or even ten years."

"I think that the chief line of improvement in the high school is along the line of better-trained teachers."

"I should find most fault with the quality of the teaching. In classics and mathematics, too formal, not real enough, not sufficiently concrete nor correlated with life. In sciences the same criticism, or the latter part of it would apply, and in both sciences and modern languages the majority of teachers are lame as to pedagogical and subject matter preparation."

"There are several reforms, but these would all follow if we had competent principals and instructors. The courses themselves are too remote in interest and in value from the world of reality. Perhaps the most important reform to come in our high

schools will be to plan for half-timing by boys and girls who must earn part or all of their own living."

"Yes. Too much time consumed in what we might call educational padding. The subjects that specially prepare for citizenship, such as history, civil government, and economics, should be emphasized for the general purpose of giving a political education and for the special purpose of holding young men in high schools until they finish their work."

"Eliminate much of the mathematics, and emphasize a continuous course of literature. Have elementary ethics constantly urged. It is the sheerest nonsense to attempt trigonometry in the high school. The principal should not teach an hour. Vigorous devotion to the intensive study of the humanities, with such other studies on the side as may seem necessary to illumine the major subjects of thought—this should be the constant endeavor of this high-school period."

"Simplified course of instruction. If a fitting school holding to the main subjects, e. g., mathematics, English, history, and Latin; fewer sciences taught as types of the scientific method; not necessary for a child to take all the sciences in the high school."

"A large amount of matter now covered in the course should be thrown out. Less attempt should be made at encyclopedic knowledge and the idea of culture more thoroughly emphasized."

"Concentration on a few valuable studies of central importance."

"Excessive multiplication of subjects, and the lack of thoroughness in a few."

"Yes. There should be far less linguistic study and more culture of tastes and character."

"I think so decidedly, in the direction of greatly increasing the informational outlook of the pupil, instead of monopolizing his time with a few formal subjects used to 'train his mind.'"

"The course should be extended downward, more industrial work should be introduced, better teachers should be employed, and more attention should be given to the training of boys and girls, with the emphasis upon character elements."

"Better provision for college preparatory work side by side with (d) vocational work for those not headed for college, a closer and more comprehensive differentiation should begin in the high school."

"We need to recognize the differing cultural, vocational, and social ends of various groups of high-school students, and to prepare for these. Some private investigations are now being carried on in New York City regarding the feasibility of a two-year high-school course, or courses, for children who will probably enter the labor market just after 16."

"The high-school period should be used to realize these aims—I, Vocational—professions, business-commerce, managerial, mechanical industries; II, Social and political; III, Cultural."

"Yes, much of the work done in our high schools to-day is pedagogically faulty. In the first place, there is a haphazard sort of an elective system. In the second place, the facts and topics taught in the various studies are not well selected and therefore are not well organized. In the third place, many of our high-school teachers are indifferent as to the importance of adapting the subject matter to the pupils' interest, capacity, and mental development. There is a tremendous waste going on in this way in our high schools to-day. In the fourth place, the college-entrance requirements impose an unreasonable burden upon the high schools. These requirements are too much under the control of specialists who are out of touch with the larger interests of the community. They don't see things in their proper perspective; they are too one-sided, because they know so little in many cases outside of their own department. One of the greatest needs to-day is intelligence applied to sensible college-entrance requirements throughout the country. This is especially true of English. Many of the books required by the college-entrance requirements to be taught in our high schools, and taught in the way that looks toward the examinations, are beyond the pupils' mental vision. Such work stifles interest in fine literature."

"A marked distinction should, I think, be made between the fourteenth year of life, and perhaps a year before and a year after, and the latter period of adolescence.

The schools should recognize this difference. There should be a transition or 'preparatory' stage between the elementary school and the high school proper of from one to three years, in which there should be outlines of general history and elementary science and work in simple composition and an introduction to literature for all; the rest of the time should be spent either in receiving elementary studies (in the case of the weak, ill-prepared students) or in such advanced work as a foreign language (in the case of the normally well-prepared pupil), and a certain amount of physical training and manual or vocational work in both cases. My own opinion is that this transition period need not exceed a year, or at most two; in case it is two years long, I would insist upon the pupils taking at least a semester's work in laboratory science and one in the study of some period of history in such a way as to give a notion of how an opinion as to historical facts is to be reached (in addition to the outline 'informational' courses in elementary science and the history of civilization)."

"Where college graduates are not required as teachers, this would be the most needed reform. Where there is not promotion every half year, it is an important reform. Where there is not opportunity to classify at least every half year, with notice of individual attainments, it is a needed reform. Where there are not laboratories and laboratory methods of instruction in chemistry and physics, in botany and biology, at least in the elements of physical and biological sciences, this is a needed reform. Where foreign languages are ignored and there are not laboratory methods of instruction and history and literature, this is a needed reform."

"Decidedly yes. An organization of courses on basis of general vocational activities, with so-called culture coming from the wisdom of knowing what the world is like, what it wants, and what one can do about it."

"More attention should be given to the scientific physical development of high-school students, both boys and girls. If the education of the Greek people teaches any valuable lesson whatever, it is that of the tremendous value of continuous and systematic attention to the development of the human body. More than three-fourths of the formal education of the Athenian people in the immortal Fifth Century was of a physical nature. Another high-school reform should be the proper correlation of industrial studies with what is known as purely academic studies."

"Free the high school from the domination of the college, and let it develop its own character in its own way. There is too great survival of elementary school attitudes and relationships also. The individuality of the student should be more largely recognized and encouraged."

3 (d).

"This can be done, as in the Indianapolis Manual Training School, without at all interfering with the other regular high-school course. The pupils are willing and able to have longer hours for the industrial work."

"I do not believe that vocation schools should undertake to teach all of the trades, or any very considerable number of them, for in so doing we would simply overload our schools and bankrupt our taxpayers, but I believe that our manual-training course might be extended both downward and upward."

"For those who go in the upper high school, or high school proper, a minimum of physical or manual training should be provided for all; and it should be possible to spend from one-fourth to one-half the time in vocational work while pursuing studies in history, civics, mathematics, science, and languages such as would prepare one for a cultivated, useful life in the business world or for the study of a profession or other university work."

"If the pupil's time must be monopolized by his own vocation-to-be, it is lucky for him if he can have such work in the surroundings of school instead of under the conditions of apprenticeship."

"By introducing 'vocation' departments and having 'vocation' studies as electives."

"I believe it is far better to do this in manual training or commercial high schools than in separate vocation schools. Such a school is a leveler, leveling up rather than down, and it should develop a sound democratic society."

"Yes. Vocational studies should be arranged either separately or in groups in every high school, to be chosen as options, just as French or Spanish or physics or zoology is offered."

"Vocation studies may be introduced, but they should always be those in which a large culture element is to be found. They should also be taught with the culture aim uppermost."

"Yes. By grouped electives, by providing in connection with the regular school work facilities for training in simple business methods, wood and iron working, use of tools and simple principles of construction of buildings, elementary principles of gardening and farming, sewing and cooking, stenography, etc. Each school should endeavor to adjust its capacities to the needs of the community supporting it."

"I do not believe that the present academic and theoretical high school, which is only a traditional preparatory school, somewhat but not yet sufficiently modernized, and which enrolls only such a small percentage of the school attendance, is calculated to fit for life in all lines, and hence I believe should be vocationalized, or vocation schools established in large numbers, both in cities and country, to suit the local demands."

"Mere academic education will not necessarily fashion good citizenship in growing youth. Physical, expressional work, which will ingrain habits of industry and induct those who are to work into useful trades, is in the direction of good citizenship. The boy who is to be a tradesman is as much entitled to the State's consideration, in the way of some preparatory help, as the boy who is to be a lawyer, doctor, or professor. Germany leads the way in her continuation schools."

"Should provide manual training, branching into trade activities, with definite exercises and specific vocational aim; or commercial training, definite, thorough, practical. These schools might also provide preparation for higher technical schools. In addition, above one-half time should be given to science, mathematics, English. In large schools, separate schools should be provided for commercial high-school students and for manual arts. This for greater efficiency in the vocational training and for better correlation with the cultural subjects included. Elsewhere departments for commercial training and for manual arts may be provided. In some cases part time might be spent in actual shopwork in factory under supervision (real apprentice work)."

"Vocational schools should be provided for a large number, and should have a large amount of purely cultural work."

"In the case of nearly every boy and girl, yes. Every high school should be a university of the arts and handicrafts. Our cities need agricultural high schools and the country districts need industrial and commercial high schools. We need no rural or urban castes. To every child should be opened up the encyclopedia of life. Reference to Springfield, Mass., and District of Columbia."

"Probably trade schools should be provided for boys over 12 who wish them and evening trade schools for employed boys and men. In this, great care must be used to see that the privilege of choosing is not ultimately destroyed. Except for a special class of students, a cosmopolitan high school is preferable."

"A system of 'intermediate industrial schools.' In the ordinary high school, also, there may be some recognition of vocational needs."

"Yes. By providing schools for young mechanics and artisans where they may receive a modified high-school education and at the same time acquire skill in technique along some industrial line."

3 (e).

References are made to Chicago Trade Schools; High School of Commerce in Boston; High School of Practical Arts in Boston; Menomonie, Wis.; Industrial Arts High School in Milwaukee; McKinley High School, St. Louis; Indianapolis Manual Training High School; Manual Training High School, Louisville; Commercial High School, New York City; School of Education, the University of Chicago; vocational schools of Wurttemberg, Germany; *Report of United States Commissioner of Education* (1898-99), Vol. I, pp. 1132, 1133; *Report of the Massachusetts Industrial Commission*; "Industrial Improvement School" in *Columbia College Record*; *Continuation Schools of England*, Sadler; *Education and Industry*, Ware; *A Modern School*, Prof. Hanus. Regarding length of high school, references are made to ex-Supt. Balliet's investigations in Springfield, Mass.; St. Joseph High School; Central High School, Kansas City; Joliet (Ill.) High School.

QUESTIONS:

- 4 (a) *What should be the length of the college course?*
- (b) *Would you advocate the following scheme?*
- (1) *To end college work with the sophomore year, but allow four years, as now, for the A. B. degree.*
 - (2) *To let university work begin at the junior year—work that gives scientific power—with groups leading to the various professional degrees or the Ph. D. degree, the last two years of college counting toward those degrees.*
 - (3) *To require two years of college for admission to all professional schools.*
 - (4) *To complete the professional work or Ph. D. work in two years more or six years after college entrance.*
 - (5) *To let the college do the first two years of the professional work, instead of allowing the professional school, as now in many cases, to do the last two years of college work.*
 - (6) *To consider the possibility of advantageously building the engineering school upon the first two years of college.*
- (c) *If not in accord with the above, please describe your own view.*
- (d) *From the standpoint of business men, so far as you can judge, what is the value of a college training for young men who are going into business?*
- (e) *Please describe devices now in use to shorten the college course; refer to any articles or papers upon the subject and any investigations now being conducted.*

SUMMARY:

- 4 (a) Nearly all favor four years, though a few advocate three years or dividing the college between the high school and the university.
- 4 (b) It will be seen from the summary which follows that fully half favor this scheme in general—to begin university work with the junior year.
- 4 (b) (1) One-half favor ending college work with the sophomore year, but allowing four years for the A. B. degree.
- 4 (b) (2) One-half would begin university work with the junior year, and count the last two years of college toward higher degrees.
- 4 (b) (3) Most of the replies would require two years of college for entrance to the professional schools.
- 4 (b) (4) One-half would give professional degree or Ph. D. degree in two years after the B. A. degree.
- 4 (b) (5) Two-thirds would have the college do the first years of the professional work.
- 4 (b) (6) A large majority would build engineering on two years of college.
- 4 (d) Two-thirds think college preparation is valued by business men, though the opinion is usually personal.

EXTRACTS:

4 (a).

“The German gymnasium and university plan is more rational than our high school, college and university, or professional school. I would advocate annexing the first two years of the college to the secondary school, and allowing the students to enter the graduate or professional school of the university at once, upon the completion of the secondary course. When necessary, the first year or so of university work might be spent in special preparation, rather than in strictly professional study.”

“Professional work should undoubtedly begin at 20 in the majority of cases, whether as differentiated college work or as purely professional work, makes little difference. The amount of time for professional work should vary with the profession. I can not think that the Ph. D. degree will continue on the present basis. I think it will become a professional degree for the teacher, and as such, presuppose considerable fieldwork, hence it should not be provided for as something just two or three years beyond the A. B. Evidently medicine and the various engineering lines will require

practice or fieldwork in one form or another, and we must see to it that the doctor's degree also procures this."

"I would not shorten the college course, but rather amalgamate it into the high school (or college if that is to be the higher school). Here we have a six years' course. The rest of the college work I would unite with that of the professional school, which may be regarded as the university. This should have at least a four years' course, but I am inclined to think that some practical bread-winning work should be possible before the course is completed. Probably there should be two professional degrees; one permitting some of the lower kinds of professional work, as certain classes of law cases, of medical practice or teaching. The higher degree may then be regarded as a condition for promotion."

4 (b)

"There are many things about this scheme that commend themselves to me. I believe we should keep the good results that come from liberal training in a four years' course in college for those people who do not care to work up to a professional degree. On the other hand, for those who wish to secure a professional degree, I believe that the last two years of the college course should count toward such degree."

"I am inclined toward the view that all liberal arts degrees should be abolished—that colleges should give the opportunity to gain culture, but should not certify that it has been gained. In professional and technical schools I believe that the best of general culture will yet be found in the biographies of leaders in the line studied and in a history of the development of the occupation and the sciences and social life related to it."

"While the public schools have been of late years much improved, especially in the Western and Middle Western States, the colleges and universities (so-called), especially in the East, but also elsewhere, have deteriorated, if we measure their standards by their educative value. This decline is due to the character of their curriculum, the character of their method, above all to the character of their teachers (especially of the younger men). I am only voicing the judgment of the most experienced and thoughtful when I say that fully one-half of all the courses offered, and the work done, is of almost no educative value whatever. I would, therefore, thoroughly reconstruct the American college from top to bottom; for it retains its name, having lost its character. (1) I would reduce the number, and increase the thoroughness, in the subjects required for admission; (2) reduce the time to three years, from 17 to 20; (3) reduce the foolish and expensive and needless exhibition of courses offered, making them much fewer, and much more thorough; (4) make two-thirds or three-quarters of the curriculum required—compelling such studies in language and literature, mathematics, and physical science, and in the psychological sciences, as are preparatory and introductory to professional and Ph.D. studies; (5) clean out the whole hotchpotch of courses which have the name, but can never have the substance of true professional studies. Business demands trained and disciplined men; if the college would do this, of course their graduates would be in demand in business circles."

"I recommend (2) and have made a report to our board of trustees urging its adoption here in 1913; the freshman and sophomore years to be required for entrance. See *Bulletin American Academy of Medicine*, No. 103."

"I can not see how any man of education can afford to do without the studies which usually come into his work during the junior and senior years in college. These are the years of enlargement above all others, the period when the horizon expands, and the larger mental relations are established."

"The chances are in favor of the work being better done if the college course should take on two years of basic science training for medicine rather than that the medical school should pretend to do the scientific work which is almost certain to be better done in a university laboratory."

"Reference is made to the new "Cooperative Engineering Course" of six years in operation in the University of Cincinnati, in which the students work in the shops every alternate week."

4 (c)

"If we are to have the 12-year common-school course, then terminate the college course with the sophomore year. I would save the two years needed for the college course by simplifying the grade work and shortening the time there two years, including the high-school course."

"I believe heartily in organizing the college course on vocational basis in the main."

“(1) To offer a two years' college course, the student to be graduated and given some appropriate recognition—possibly the A. B. degree. (2) To offer an advanced college course of two years, the work to be cultural with some degree of specialization, the student to be graduated with a higher degree—possibly A. M. (3) To have various types of professional schools, some admitting on the basis of high-school work, some requiring the two years' college work and others requiring four years of college work.”

“The proposed scheme, in my judgment, means the practical extinction of the culture side of college life, the destruction of the old college course, and the practical substitution of the professional for most of it. I would substitute the following: Elementary school, years of child's life, 6, 7, 8, 9, 10, 11; high school, years of child's life, 12, 13, 14, 15; college, years of child's life, 16, 17, 18, 19; professional, Ph. D., years of child's life, 20, 21, 22.”

“It is far preferable that the college course should be completed in three years, courses ‘looking toward’ a chosen future work, that is, subjects being grouped as minor electives or minor requirements, about a major core of subjects in which advanced work must be done, and which may even make the group ‘pre-legal,’ ‘pre-medical,’ etc. When this group (say two-thirds of it being prescribed—though the group itself may be elected) is completed, as it ought to be in three years, the bachelor's degree ought to be given. Then three years would be none too much to spend in strictly graduate work for the Ph. D. degree. It is easily possible to make the college course so easy by elective courses and avoidance of advanced work that it never forces the choices which should be made—say even for or against future study and a ‘learned profession.’ There is perhaps danger in education stepping over into science's own country to get a degree with which to meet a mere stage in education. If science does not complain, perhaps I ought not to do so, but I am calling attention to the peculiar propriety of science in the specialist's degree of Ph. D., because it ought to be classified with the other vocational degrees; and this discrimination shows the lack of warrant for any specialist's degree absorbing educational courses. When a college degree is earned, its work is done, and the only rightful demand upon it is educational. When the specialist's degree is earned, science, not education, is to say. The graduate school loses educational perspective when it assumes to influence the college course. Colleges might differentiate somewhat among themselves. That which is best for Wellesley is not therefore best for Cornell or Chicago. The varied needs of different classes of college students should be recognized and met. There is still a place for the ‘four-year liberal-culture’ college, though it is perhaps not so large a place as it was thought to be a century ago.

“My own view is that it is all a matter of substance and of the quality of the teaching. In several parts of our country, wiping out the four years' course would be a calamity of major importance; the college still has a most important place. But in other regions we can spare the full course by splitting it between the high school and the undergraduate university work.”

“It is the time (college) when the man is made and not the worker; and certainly man is the chief consideration or should be. When the work of this period has been done well, not a great amount of time, relatively speaking, should be required to fit a man to undertake his life's work, since he must ever grow or be lost in the stressful competition with his fellows.”

“The University of North Dakota plan is as follows: Students' reports each semester: A (excellent), to which attaches 1.3 credits; B (good), to which attaches 1.2 credits; C (satisfactory), to which attaches 1 credit; D (passable), to which attaches 1 credit.”

“Instead of lessening the number of years of the college course, I suggest a plan similar to that now in operation for engineering students in the University of Cincinnati. By this plan students work in the school two weeks and in the shops and offices of the manufacturing and engineering plants of the city two weeks. The class is divided into two sections; each section relieves the other in the schoolroom and in the shop. In this way the work of a four-year course can be done in six years; students pay their own way through college and gain a practical knowledge which enables them at once to begin work at a good salary.”

4 (d).

“I do not believe that the average business man cares much for a college-trained man.”

“My observation leads me to the conclusion that a college education for the young man who is going to be a business man is of comparatively little value.”

"My experience with reference to the value and influence of university training on young men in business is that those who have material success in business enterprise are usually not those who have graduated from a university."

"I regard a college training for young men going into business unnecessary. The curriculum of a college is not generally along practical lines, but while not essential, it has a tendency to enlarge the faculties, etc. The average business man is a worshiper of the 'Golden Calf'—he is after the 'Mighty Dollar'—the spirit of covetousness seems to permeate his system, and when old age overtakes him he is at a loss to know how to occupy his time."

"None. I refer to the typical business man, and not to the great business man. The latter unusual person is in favor of a sane college course in history, languages, sciences, history courses, economics, English, very thorough; German, biology, physics, chemistry, history of philosophy, algebra, and geometry with trigonometry. Not many see much value now in Latin or Greek that is not to be had from four years of German (or Spanish or two modern languages). This course is to be taken by a youth who takes part in the social and athletic life as a doer of things. Business men as I know them—manufacturers, wholesalers, railroad men—desire in the young man certain moral qualities—obeying rules and instructions implicitly, promptness and punctuality, arithmetical perfection, rapid and legible handwriting, facility and accuracy in English. I call these 'moral' qualities, and so they seem to me, and they are glad to get also the young man who knows a great deal of geography, of civil government, and of general information. They desire also certain physio-moral qualities, such as cleanliness, neatness, and orderliness. This is to say, they desire health, strength, and discipline. They like frankness, openness, courage toward themselves, and discretion toward all others. Our school courses can not develop these qualities for two reasons—our teachers do not themselves manifest them and our courses are not designed to produce them."

"We have a much bigger question of the value of the college course than the unimportant query of the business man. I believe the college does often tend to disqualify for certain types of usefulness, but the risk is always taken of overcultivating shallow soil, and that risk is certainly enhanced by both college teachers and college courses who have lost sight of the claims of humanity and human interests. If the college affords no considerable part of the experience that qualifies, the business man is justified in drawing the attention of the college to the limitations of usefulness which the candidate still suffers from, though the college has tried to do its humble part in removing those limitations. For my own part I see a sure road to this end. Let the college course be sincerely and seriously a part of vocation, too definite to attract the 'elective' students; too hard to attract the man who is too lazy to go to work at a serious business; too exacting to be satisfactorily done by the unmotivated trifler who goes to college kindheartedly acquiescing in his parents' fond wishes, with a superior indulgence of their ambition. I seem to have reached a point where I am demanding a business training for college instead of discussing a college training for business. And as an educational question, I think this is a consideration of far greater importance."

"The business of the world becomes more that of directive energy from skilled and trained minds. The college education is becoming more and more essential to the business man. Also his position in society and public life is determined by college education. The college course should favor his selection of those subjects which best fit him for his business career."

"Without question the men with college education who have gone into business have soon forged to the front. Instances of this fact are numerous in my limited acquaintance, numerous, I mean, compared with those who have not had the benefit of a college training. I have been teaching for a number of years in manufacturing centers, and I know that this condition is true in great manufacturing plants."

"They (college men) think; few people (or educated people for that matter) do. They are systematic. They have many bits of knowledge that are useful sometimes when least expected."

"I think I can testify from actual experience that the college training is of very great value to young men who are going into business."

"So far as I can judge, business men value highly the training which young men who are going into business get in college. In the last 10 years there has been a marked difference in the attitude of business men toward college training."

"I do not see how any man of business or other can doubt the value of college training; for men who are going into business or any of the professions, the training of a college course and association with other young men bent on the same pursuit, as a disciplinary process, is entirely too valuable to require any argument. It gives the habit of thinking quickly and deeply at the same time, and the capacity for the enjoyment of life in every direction is so largely increased by it that the college-trained man is better rounded and better fitted for whatever he undertakes."

"A college training is of more practical value to a young man going into business than anything else can be."

"A college training is invaluable to a business man. Very few broad-minded business men maintain that a college education is an economic waste, and it is the regret of many successful noncollege business men that they have not had the experience and benefits of a college education."

"To do the best work an artisan must have tools of good quality that are in perfect condition. A business man's brain takes the place of the tools used by the artisan, and if it has been sharpened and tempered by a college education, all things else being equal, it should be better able quickly to grasp and solve the problems that constantly confront a man who is engaged in mercantile enterprises."

4 (e).

References are made as follows: Six-year courses at Pennsylvania and Michigan, combination courses at Harvard, three-year courses at Sheffield Scientific School and College of Clark University, Harvard three-year plan, Columbia plan for senior year, Western Reserve plan (one year of professional school distributed in college), Cornell (two years of medical work in college), Chicago's plan of Junior and Senior College, credits for quality (University of North Dakota, Catalogue, pp. 28-30, and 1906 *Report of Association of State Universities and Educational Review*, December 1906); also "Readjustment of the Collegiate to the Professional Course," *Yale Bar Journal*, VIII, 1; *Report of the Bureau of Education*, 1899-1900, I, 615; *American Bar Association Report*, XXI, 575; "Length of the College Course," *Proceedings N. E. A.*, 1903; Calendar State University of Iowa, pp. 106, 361, 437; "Education of Business Men" in *The Voice of the Scholar*; investigations of the Association of Presidents of Colleges and Secondary Schools of the Methodist Church.

QUESTION:

5. *How does the whole problem of culture and time elements in education relate itself to the demands of business and society to-day or to the ideals of our civilization?*

EXTRACTS:

"In the first place, the practical demands of life and the interests of culture are congruent in this, that nothing which is valuable merely for the training it gives is worth pursuing. Culture is fitness for the large demands of life; the instruments of culture, therefore, are practical means to a large, rich life; if, then, a study is without practical value in this large sense, its usefulness as a study is lost. Any amount of training, discipline, and culture can be obtained from studies and pursuits that have value beyond that of mere mental, moral, and spiritual gymnastics. I conclude that a curriculum might seek to put the youth into secondary work just as soon as he reaches the stage of adolescence, as distinguished from childhood proper (i. e., at the age of puberty), and then, after insuring that he has a notion of the fundamental facts as to the development of human civilization, the practical results of present-day scientific achievements, and a reasonable command of English and an introduction to the pleasure and profit to be gained from reading, his secondary course might be either largely preparatory to professional study (i. e., consist largely of mathematics, language, etc.) or largely vocational. In either case it would be practical, and should be as economical of time as possible. Sixteen years of school work preliminary to professional study is unnecessary and hostile to the time interests of culture. Better spend more time in university work, making the professional preparation more leisurely and more largely cultural. If secondary schools had double sessions, boys might (working on the same job) support themselves and go on studying indefinitely. Their studies would progress more slowly, but they would be gaining more time culture."

"This is a question the answer to which requires an elaborate essay. I think the relation or connection between education and business is closer on the moral side than on any other. If our education could transform our ideals, it would exert a very powerful influence on business. For the sake of business, I would lay far more stress than is now put on the studies that deal with man and history—what man has done; on

literature—what man has thought and felt. I might sum up what I would gladly have time to say at length, that I do really and heartily believe that the best way to adjust students to the intelligent demands of business is to adjust them to the interests of society and, so far as may be, to the ideals of our civilization.”

“The general feeling respecting preparation for life and the exactions of the present business demands make it almost necessary that young men prepare for their life work in four or five years after completing a high-school course. People that look a little farther into the future feel and see the importance of a certain period of the college life of a young man being devoted to cultural subjects. Putting everything together, I am inclined to think that there should be about six years devoted to the preparation for life after completing a high-school course, and that fully two years of the college career should be given up to cultural subjects.”

“Since I have been in college there has been a distinct drift away from studies that had very little value outside of their alleged disciplinary effects, to studies that combine both discipline and useful information. This drift should be encouraged. The drift is always away from intentionally making things ‘hard,’ or giving things only because they are ‘hard.’ The easiest ways of acquiring knowledge are beginning to be realized as hard enough for all disciplinary purposes. This realization is to be encouraged.”

“Any subject studied from the standpoint of civilization, that is for service, is just as cultural, and more so, than the old classics studied for ideals only. It might be stated this way, that subject is most cultural which is most serviceable to humanity from a dynamic standpoint. All industrial, vocational, and other subjects, when studied and realized in life for a richer life and deeper civilization, are cultural and at the same time meet the business interests of life. The business interests of the country, as I interpret them by conversation, by mingling with business people, by reading, and by a study, as it were, of the new life, think too much is consumed by education without equivalent results. When our modern civilization is measured up and properly interpreted, it seems to me that the criticisms of the business interests are justified. The point of difficulty for us to overcome is, when making a study of the problem, to rise above our well-fixed habits, prejudices, and schooling. It is very natural for us to interpret, with our experiences, which are those of the educational cloister. When teaching, we should teach from the standpoint of the pupil as to ability experiences. Is it not the same with the mass?”

“It does not meet the conditions. It requires too much time to get ready to begin, and causes too many to be deprived of the values of educational institutions.”

“The world will come much earlier to the right point of view if archaic college professors will give up some of their ideas regarding a distinction between culture and utility. If college men will only see to it that a college training makes men useful and more broad-minded, the world will appreciate the college more. The university should be a place where everything useful under the sun is taught and everything useful has a place in the university, and anything useless has no place in it.”

“If consciousness first arose and developed for a very practical purpose, namely, the better adjustment of the organism to its environment; and if reason itself, from its beginning, appeared and developed in response to the same practical demand and need, it seems to me that there is room in all our education to-day for a larger element of the truly practical in the good sense.”

“Culture will come best by an enrichment of vocational life. This is real culture. The ideals of our civilization are essentially rational in that they require each individual to maintain himself economically, participate actively in social control, and attach worth to his own method of life. ‘Culture’ has been a borrowed thing since the Romans began aping the Greeks. Vocational preparation is entirely in harmony with culture in best sense, and there is doubtless plenty of time for each.”

“Business, society, civilization demand of the world’s workers a certain minimum of equipment and maximum of achievement. When academic requirements are so heavy that in order to complete them the intending professional man has to work on his preparation past the time of his greatest energy and efficiency and adaptability in his chosen work, society is the loser.”

“For men and women who need the education—as education quite as much as productive service in other directions—of getting early into their nonacademic callings, there is evidently need of squeezing a lot of water out of our curriculum. From my point of view the problem is how to do this for the many in a way that will not desiccate the course for the few.”

"The ancient ideals of our civilization demand the humanization of industry. Our political as well as our social democracy makes the same demand. The world-wide competition of our nation in the markets of the world and the unusual opportunities in the opening of our continent and possessions for the amassing of a fortune make it desirable that the time element should not seem too extended in order that we may persuade our youth not to yield to the temptation of neglecting education, particularly so-called cultural education."

"It takes too long to secure an education. If educated by his father, the boy's dependence upon his father is unduly prolonged, destroying his independence and adaptation. He is unable to get into the stream of things when isolated from the world so long poring over books. If the young man is educating himself the strain is too long. The modern educational régime is to keep the man and woman isolated and excluded too long. The modern demand is for young men and women to get into things while plastic and full of the sense of adaptation."

"It seems to me that the trouble with our higher education is not that too much attention is paid to what is called culture, but rather that the purely preparatory period is too long delayed. We need, not less culture or less time in education, but a better combination of the various elements."

"That there are defects in our system of education is now generally admitted, and these defects are mainly in institutions above the high school. The elementary schools and the high schools, in the main, give the kind of education demanded by society and business to-day."

"The shortest cuts are desired, and education must be prepared to defend its demands upon the time element by the production of good and sufficient testimony in favor of the necessity of these demands."

"If the question means, as I must believe it does, in what ways (modes) does the entire educational situation (time of youth and body of knowledge, etc., to be acquired) lend itself to the development of our youth for the needs of social life and in conformity to the practices of our best men and women, I answer that an adjustment is now proceeding from which we all have great hopes. Its ways are a more enlightened public opinion, a more determined public decision, better teachers, better buildings, better books, more apparatus, and smaller and often better boards of control."

"I think we shall retain the primary school as fundamental and necessary for all children and then begin a differentiation, based partly on time conditions and ability to move more or less rapidly, and partly on content interests and corresponding vocational interests. This differentiation may be provided by a 'double-track' system from fourth to eighth school year, inclusive, or by grammar schools with differing intensity and speed, or by something like the Elizabeth plan. It is certain that we shall sooner or later undertake to eliminate the waste of time and interest which brighter pupils suffer in the grades. The American college is probably the chief means of promoting ideals of humanity (morality, culture, the sense of human brotherhood, the worth of man as such) and counteracting the vice of materialism so peculiar to our nation, that we have or can devise. To eliminate it from our system or to curtail its facilities or diminish its achievements would greatly weaken our national life. If it should be reduced to two years we could repair the injury only by encouraging the greater number of students destined to professional life to take post-graduate studies before assuming the professional course or contemporaneous therewith."

"Time is an absolutely essential factor in the development of culture. Generally speaking, the less time the less culture. The business world, which is prone to look upon education as a means of attaining greater efficiency in business affairs, shows a tendency to resent the expenditure of so much time upon the more purely cultural elements during the years when the youth might well be studying professional subjects. Hence, the problem is one that affects, and is affected by, social and business conditions. It seems desirable to make it possible for young men to complete their academic and professional training within six years from the time they enter college. It is not unlikely that society and the business and professional world will, in the aggregate, receive more culture through the combined course than through the greater number of years spent in separate courses by the fewer number."

"The demands of the commercial and business world of to-day are abnormal. The ideas engendered by wealth are so exaggerated as to be nonprogressive. If we have invention in educational methods as we have in industrial life, we certainly ought

to do more work and better work in a shorter time. There seems to be only one thing to do—cut out part of the work. For if students are overworked in a four years' course now, what are you going to do when the course is reduced to three years? Our old system has a tendency to introduce, as conducted now, machine-like methods which seem to be against culture rather than in favor of it."

"It is a serious question, I think, whether education should attempt to fix and define standards or to accept standards set for it by the demands of society and civilization of to-day. A certain amount of conformity to standards set by modern social forces is necessary, else the young graduate will find himself in a world for which he is unprepared. Nevertheless the school and college must not blindly follow external leadings; they should be molders of public opinion. There is a very general feeling that much time is wasted in college—that the work of the world is delayed a year or two by the frivolousness and emptiness of what is called 'the life' in college.

"The college course is undoubtedly fundamental to any success. This is the time when ideals are fixed irrevocably, when views of life are broadened, when a philosophy of living is born, when no thought whatever should allure the student away from considerations of obligations to fellows, of duty toward one's self, of fidelity of purpose. The student should not have thoughts centered on self, but upon the other fellow; when altruism shall take deep root. If such a time be well employed, fewer bankers will occupy cells in bankers' row, fewer engineers will be dismissed for incompetency, fewer so-called college men will win the contempt of the man of practical affairs. Culture should relate to fundamentals in society, business, civilization."

"There is the other side to this question that we must recognize, the material development of our age and the demands on us from that side, but if we yield to that, we must be appreciative of what it costs, and the danger is that we may allow it to cost more than the results are worth. My whole thought is that to get the best results out of our education, there must be time for the growth and development of the pupil and the student, a time for thought and observation and meditation, and the fixed standards and ideals as well as the acquiring of facts."

"Business and society are not so eager to get men at work, as to get efficient men. There are sufficient workers in all spheres of life, but capable men are at a premium. If education means anything, it means increase in efficiency. Instead of worrying about getting men to work earlier, educators need to worry about the quality of their product. The entire educational problem to my mind reduces to this, How shall we produce the highest type of manhood? The man is the great thing; his business and his service are secondary."

"The demands of society seem to me to be in greater measure than ever before for thoroughly trained men, liberally and professionally, rather than for a quack and short-cut training. We can spare these young men, can give them the time, and the money can be forthcoming, to give them the best, so that in the end they may make the most of themselves and be most useful to society. Make the training ever richer, better, more effective rather than shorter. The professions do not all stand on a level in this matter. I do not think the demand for shortened courses is as great as it was five years ago."

"A high degree of specialization counts for industrial efficiency. If this is accompanied by great narrowness of view, it counts against political, moral, and æsthetic efficiency. Just now there is little danger of lack of efficiency in production. The real evil is in the moral, the political, and the æsthetic realm. If an engineering student studies his subject in its wider relations, if he studies its economics, its ethics, its history, its social meaning, he may get something of high cultural value."

"It seems to me that the present ideals, both in the business world, and in our universities, are so largely pragmatic that only scant consideration is likely to be given to those phases of education which do not seem to have any very direct bearing upon the life of the individual. As the more ideal values of our civilization develop, the greater will be the place for that more general culture which is not practical in the narrow sense of the word."

"The demand that is the real need of society to-day is for higher and greater culture in all classes. Culture makes the man strong and sound bodily, brings the intellectual powers to the highest pitch of development and cultivates a real sense of moral obligation to self and others. The time elements are harder to deal with. We ought to strive for an organization of society that will give the young people the education that fits them really for the position which they may be called upon to fill. As things are, the time element cuts off the great mass from any real education."

"I think that the true ideals of our civilization demand high culture and an abundance of time in our education schemes. One great need of our country now is men who can think straight. This ability to think is an absolute prerequisite to any kind of high and noble doing."

"Generally speaking, we would say that the more time spent in education and the more culture attained in education, the better the business, the society, and the civilization."

"For the attainment of such pure ideals, time is no consideration. The cathedral at Milan is more beautiful than the capitol at Denver; but it took some hundred of years longer to build it. Short courses and elimination of 'non-essentials' may be necessary to turn out money-makers quickly, but they are fatal to the attainment of true and high ideals. If you institute them, do not displace the longer course, but simply let them stand as a makeshift and work for the more desirable end."

"Since the Civil War the economic aspect of our civilization has been demanding and receiving great attention in this country. The eager desire to get on in the world in a material way, the tremendous expansion of our trade, and other similar influences, have been powerful. Labor-saving machinery and other means for making short cuts to wealth have suggested that there should be short cuts, also, in education. Our American colleges and universities have, it seems to me, responded so far as safety permits, to the demands of the economic spirit."

"The desire to shorten the time element in education is interfering seriously with our ideals of education and civilization. Graduates have to do with men as well as with things. Technical knowledge and skill alone come far short of furnishing the ideal education."

"I believe that the business world and all society, from now forward, demand much more culture than in the past for a man to take a position anything above mediocrity."

"Colleges and universities are not built to meet demands, but grow men and women. If we grow men and women, they will make business ideals coordinate with educational ideals."

"I am very strongly of the opinion that the old cultural courses of education give the best preparation for successful life in either the world of business or the world of scientific investigation. The most pitiful failures that I have seen, from the standpoint of high living, have been the men who knew their own little specialty so thoroughly well that they had dug for themselves in the strata of life a little narrow glacial groove of thought which enabled them only to look forward and perhaps above, but never around. I believe that it is entirely possible for courses of study to be adapted to both the cultural and the specialized end of education, and I have endeavored to persuade the boys who have come to me for advice to first seek the B. A. degree before they seek a technical degree, and have sent them by preference to colleges where the courses were combined."

QUESTION:

6. *Please give your views briefly on the whole subject of the organization of education in the United States.*

EXTRACTS:

"If it were possible to reorganize the whole of education in the United States now, I believe that we are more nearly prepared for the German system than we ever would have been before. Most of our universities are doing too much elementary work, and, if the high schools and smaller colleges would do what is now done in about the first two years of our college work in so-called universities, we could use the equipment and endowment we now have to much better advantage and more profitably. It is certainly possible, and within a few years could be made practicable, to cover the first two years of college work in the local high schools, thus leaving the State universities, where they exist, to do more university and professional and vocational work."

"We have shoved elementary education too far and crowded our universities to the wall. They are swollen by men and work which belong to the gymnasium, the supplementary high school or the college. We have asked too much for quantity at the expense of thoroughness."

"To let the same work count toward two degrees—say A. B. and LL.B. or A. B. and M.D.—is educational juggling that borders on dishonesty. I give instances of time-saving as follows: A boy in college at the age of 15 stands near the head of a very

large freshman class, another graduated with the degree of A. B. at 19, another took his A. B. degree at 18. This is possible in the case of most students who are permitted to take up their Latin at 10 or 11 years of age. The cry now is for vocational training. I notice that those who cry the loudest have never plowed a furrow, nor made a horseshoe, nor worked a day in shop or factory. They seem to think a trade school a very good thing for their neighbor's son. Take the 25 leading industries scheduled in the census of 1900 and see for how many vocations the public school can specially fit its pupils."

"There are four units in our educational system—the elementary school, the secondary school, [the college], the graduate or professional school. Each element magnifies its own functions, and each unit seeks to control the units below itself, and to increase still further the burdens they are carrying. This process can not go on indefinitely. Unless there is soon some abatement of the demands on each of these units from within and without, a process of elimination will be a necessity. It may be that the high school will be extended upward two years and there meet the professional school, thus eliminating the college. Or superficiality may eliminate thoroughness and real discipline. My own view is that of a conservative; that each of these four units should put on the brakes and slow down, until in committee of the whole it can be decided in what direction lie the safest lines of future development and organization."

"Briefly stated, I believe a more thorough education can be given in our schools in a shorter time than is now required, by a combination of various improvements, all looking to greater efficiency. I would have vocational training dovetailed into general training, and have all courses eventuate in definite preparation for some occupation in life. To this end I would have vocational courses of different kinds branch off at different points from the central line of general culture. There should be no such branching before the end of the sixth grade. I would have alternate courses offered in the seventh and eighth grades, some of them leading in a vocational direction. I would have free experimentation in various rearrangements of the high-school course: In some cases the ordinary four-year high school as we have it now; in some cases a six-year high school beginning with the seventh grade; in some of the largest and strongest high schools a course leading to the middle of the college course and beginning with either the seventh or the ninth grade. I think it desirable that a professional direction be given to the upper half of the four years' college course, or that specialized studies, leading toward original research, begin in the junior year. The most likely places for a possible saving of time in such a scheme as this are in the last two years of the elementary school course, and in the six years following the completion of the sophomore year in college."

"The college, standing between the high school and the university, occupies the most ambiguous position in our educational system. Its course of study and the time required for it depend largely upon the work a man is to take up after leaving college."

"University, entered, as in Germany, about 19 or 20, and affording special training in everything possible (whether merely erudite or applied science), astronomy, philology, history, engineering, medicine, etc. Length of time indefinite, normally about five years."

"I believe that the ideas indicated in the preceding pages can be carried out by the following changes: (1) The development of select high schools into strong and well-equipped institutions giving a six-year course leading to a degree; (2) the undertaking by some colleges of all the preparatory work and the giving of a degree in six years from the elementary school; (3) the expansion of some colleges or universities with professional schools embodying a large part of their higher liberal work with the professional courses; (4) the division of the professional course with a preparatory course of two or three years according to the profession, after which practical work can be begun in the lower departments of the profession, and a later course of two or three years that can be pursued, in part at least, while the student is in practice or after several years of practice."

"A considerable diminution of the quantity element in college-entrance requirements. The college should come down to life and to the people. They should come down to meet the high school planned as above, rather than require the high school to come up to its (the college's) arbitrary and unpractical requirements. The college course should be four years, so planned that the student may drop out at the end of two years to enter the professional school, or so that, should he remain, he may complete the professional school in two years after securing his A. B. degree."

"Elimination of unnecessary subject matter in elementary subjects. Different kinds of high schools to meet the needs of different kinds of pupils, commercial, clas-

sical, scientific, industrial, etc. Schools of 'practical arts' for girls. Recognition of different types of colleges: the 'liberal culture' college is but one of these types. More recognition of vocational aims in the junior and senior years."

"I think that it (the school) is too mechanical. Let a bright boy or girl finish the grammar school course in five or six years if possible. As to subject matter, it deals too much in 'smatterings.'"

"If I were to arrange divisions of educational groups, I would have a primary division covering five years, a secondary division covering the same period, and a collegiate period covering three years. These periods should simply indicate norms. The first period would be a formative one, the secondary a vocational one, the collegiate period a technical one, and the university period a professional one. The spirit of the American child is to do something, and do it he will. If the school does not give him a chance, he will quit it. We should really be proud of this initiative; instead, we hear educators deplore it. Dropping out of school is because of the violation of this natural impulse to do; keeping it repressed. Many who remain in it are depressed."

"The tendency is to get away, more and more, from the monastic system and to educate men and women more in real life for real work. The greatest defect of our educational system is this neglect of those who have to go to work at about 14 years. Courses of study and reading should be provided for them which will fit in with their work hours. Their practical work, studies, and reading should be systematized and coordinated for them by competent authority. Every city should have a corps of advisors or teachers to take care of these young people and to see that their education is carried on as long as possible. A public-works high school is one way of doing this."

"The organization of education in the United States appears rather idealistic than realistic, theoretic than practical, except in our polytechnic schools."

"Knowing and doing need to come into closer relations. The president's address to American teachers in Washington is one of good value. It shows what Americans want for American youth."

"I believe that there should be greater elasticity in our courses of study, so that those who go into vocations at a comparatively early age may prepare themselves for these vocations in the grades, high school, and college to a larger extent than is at present possible. For example, I would introduce manual training and domestic economy into all grade and rural schools, at least as elective work; I would introduce as wide a variety of vocational courses (commercial, manual training, etc.) as possible into our high schools and would make a number of technical and semitechnical courses elective even in our colleges of liberal arts. I believe we have failed hitherto in educating the faculty of expression through the hands. I would make it possible for a B. A. graduate to go from the Greek recitation room to the blacksmith or carpenter shop and have the one line of work count equally with the other toward the B. A. degree. I always look for B. A. men for the deanships of my colleges of engineering. I believe that, similarly, the holders of both B. A. and, say, the M. E. degrees would make better deans of our colleges of liberal arts."

"Vocation training, trade schools, if one must say it, which, however, include culture studies, are needed for pupils who complete an elementary education and must turn aside to practical affairs; and vocational schools parallel to the college age, such as we have in the better mechanical and agricultural colleges, will win a larger place. One deplorable defect in our system is the lack of scholarship breadth, and training, on the part of the elementary-school teachers and to a large extent on the part of the high school teacher. The best results for either culture or efficiency can not be obtained where the teachers lack culture and training. Despite the normal schools the conditions in many States are depressing."

"There is need of more industrial and commercial work throughout the course, not to be required of all, but to be optional for those whose circumstances are such that they must soon be thrown upon their own resources. I believe that opportunities of this sort should be provided in the regular public schools. To do this would be more expensive than to provide special schools, but it would pay, for it would preserve the American democratic spirit throughout the educational system at the same time that it would recognize social and economic distinctions made necessary by differences in individual ability and financial circumstances."

"I believe in the unity and solidarity of our educational system. Professional, technical, trade, and continuation schools should be as closely coordinated with the elementary schools, high schools, and colleges as possible."

"I think there is another line of approach to this subject which would depend on expressing our educational aims in the four specific fields of physical, vocational, social (moral and civic), and cultural ends, and then making our adjustments to the needs of varying groups, with which society and education must deal."

"I think some way should be found of getting part of one's education while engaged in productive work."

"I believe the greatest waste is in the dilettante attack on the elementary subjects in late primary and the secondary schools. Bringing to bear upon the country at large the necessity of great training schools for trades or the general mechanical proficiencies upon which trades depend, seems to me the vital problem of present-day education. A differentiation in the middle of the high school which shall give an optional trend similar to the gymnasium and realschulen in Germany, but still more largely directed toward trades, might be a desirable first step. I am in favor of getting the first two years of a medical and again of a law course within the limits of the A. B. degree."

"I would have the Commissioner of Education a member of the President's Cabinet, and dignify his office by giving his department a larger scope and more vital relation to our educational system. I would establish a great national university at Washington, with all departments of learning provided for. I would have a State university in every Commonwealth, except in New England, and the incorporated colleges and universities associated with it in the closest relations that can be secured. I would have the superintendent of public instruction the head of the State system; and have him, assisted by the university, make up a system of accredited schools which he would yearly have inspected. I would leave the rest of the system much as it is, except provide for a system of trade schools, and labor for closer relations between all grades of schools. The county training school should be a trade school as well as an agricultural and normal school."

"As at present the unit in the system of education should be the State, with much more emphasis than has been put upon it. There should be opportunity for State-wide education in high schools, as well as in State universities and State normals. There should be the consolidation of schools in connection with political units, as a township. The educational system in a State should be recognized as a department of State government, and practically made coordinate with the present executive, legislative, and judicial departments. Lower schools, under State standards, should be accredited so that there may be free pathway for the promotion of students from the bottom to the top of the system. These State systems should have some sort of Federal coordination in a bureau of education at Washington, developed into a department with a cabinet officer, and with a national graduate university for graduate work only, along the lines of a bill for a national university proposed by the National Association of State Universities."

"Education to-day from the kindergarten to the university is lacking in effective organization. The rapid scientific progress has in a large degree brought about this condition of affairs. Racial experience accumulates so rapidly that the educational organizations have to be continually remodeled. If the race would stop accumulating experience for five years, we could get well systematized courses of study, but that of course is impossible. We are trying to do too much in our colleges, secondary schools, and in our grammar schools. We are trying to teach too many facts and too many topics; we are not relating such facts and topics properly to the learner's power of comprehension. In our overemphasis at times upon the rights of the individual, we are making serious mistakes in our elective system. It is an easy matter to be too lax in allowing students to elect those things which appeal to them because they are easy. The group system of electives is much better. But if we taught much fewer things in our school and college work, we should give a much more thorough preparation for life."

"The Bureau of Education of the National Government should be advanced in dignity and power. For a large class of our population who can not take the time to attend institutions of a higher character, vocational schools should be provided. Each State system of education should be so organized as to make it a State system in deed and in truth."

"I am very firmly of the opinion that we have advanced far enough in our civic life to risk a more centralized form of educational procedure. I believe that we could learn something from the French organization of public schools, that our Commissioner of Education should be of sufficient authority and dignity to be a member of the President's Cabinet."

"Just now there is a demand for greater centralization of the control of education."

"The establishment of an educational system is a matter of evolution. Order is gradually emerging from chaos, and this process can not be greatly hastened. The most that can be done to-day is to endeavor to formulate a plan of ideal organization, to be fulfilled as conditions seem favorable. Such an ideal plan would be: A strong central (representative) national body, whose duty it should be to unify standards for primary, secondary, academic, and professional education."

"The organization of education ought to be such as will bring the opportunities for at least a high-school education home to the great majority and not the favored few. To this end there ought to be county and township high schools everywhere organized and supported."

"Colleges and universities need to be defined by law. It should be possible, as in Germany, for a student to go from any secondary school in any State to any college in the land without loss of time. I hope the day will come when no one can teach in an elementary school without a full normal-school course of training, and no one in a high school without at least a college training, plus a year of professional study and practice."

"The question of education everywhere is a question of teachers; and certainly under the present State methods good teachers can not be secured, at least in the rural and elementary and even high schools. The teachers of the rural schools of the Nation are not as good, as a class, as they were 25 or 35 years ago, for a strong element of young men have left the work at the call of more remunerative opportunities. I believe there is room for some degree of nationalization of education."

"The lack in education is rationality. Instructors have not much to build on; hence in taking a boy in charge it is a matter of memory."

"My whole being repels the suggestion of business men that our children should throw to the winds every thought save only the one of practicality. The American youth has no business with the business of the world, per se. When we shall have developed his highest potential, in his physical, ethical, and intellectual nature, then give him opportunity to test his powers with his fellows; he soon will discover his bent and will be achieving effectively for himself and for the country."

"This subject is always too comprehensive to be considered very briefly. In general, I think that education as it is generally pursued in the United States is inclined to be superficial, especially in these latter days of elective and special courses in our colleges. I am a great believer in the old-time college curriculum set out by men of knowledge and training, as they certainly can judge what is better for the average youth than that youth himself. Let the youth receive such a training and then devote from one to three years, and more if necessary, in acquiring some specialty, such as law, theology, medicine, business, industrial and mechanical art or agriculture, or even some one branch of any of these, they will then be better prepared to devote their lives to the very thing they wish to pursue and do so successfully."

"No school that is regarded as primarily 'preparatory' to some other school has yet achieved a real educational reason for being. There can be no doubt that when real culture is through with the bachelor's degree, commerce will set a high value upon it, reinstate it with new propriety as a 'degree'—a mere step in the preparation for profession. Yet for the present it belongs to the college, and the college deserves to live to use the bachelor's degree. I should like to see the college course and its degrees relieved from the pressure of this discussion, being allowed its place as a divergent limb of higher education whose integrity is to be tested by itself. The colleges, smothered beneath the wings of all-absorbing universities, are too fast losing character as colleges by the suffocating suction of specialization which sucks out every serious thought of education except for vocation, or the sordid dollar. No person of normal ambition, child or adult, can be blamed for losing all taste for a task whose chief end consciously set before him, is to do the task simply to be able later to do some other task whose claims can not yet be presented. Educational chaos muddles the mind of any school that assumes a hierarchy of stages and itself as possessing any rights whatever in the premises over the preceding stage. We should be able to read the title of the college clear to a place among educational, not 'preparatory,' institutions. I object to deciding the fate of the college, the length and character of its course, the very question of its right to any separate existence at all, in a court, which, I claim, has no jurisdiction in the case. If there is a college, its own specialty is 'highest' education, and if faithfully pursued it is a higher education than that of any special school which prepares for any special vocation or profession."

"Great needs are: (1) More money, and more men in the schoolrooms of upper elementary and high schools; (2) greater economic and official independence and freedom of the teacher; (3) more attention to practical usefulness, and the culture of powers and appreciation and enjoyment, 'the unbought and wholesome joys of life.' The righteous and enlightened will."

"(1) We should encourage endowed enterprises, of all grades and plans. (2) We should raise slowly but steadily the requirements for teachers in all grades and positions, including State and municipal superintendents. (3) We must have better boards of education. To get them we need small membership, election at large and election at special elections upon the petition and nomination of the citizens (not over four or five members). (4) We should have better fundamental school legislation: (a) Minimum salary law; (b) minimum professional requirements for teachers; (c) pensions for those invalided for any reason; (d) one year of rest on full pay every seven years (all the spring of life is out of nearly all our experienced teachers); (e) proper school buildings. (5) We need better and many more professional schools for teachers. (6) We need to separate in public opinion, in fundamental legislation, and in board rules and regulations the relative duties of boards and of superintendents."

"I have a suspicion strong enough almost to amount to a conviction that bookwork up to the age of 13 or 14 ought to be almost abolished, and that the basis of education up to that age should be almost exclusively motor, dancing, games, music, drawing, manual training of every sort, with reading and writing taught early of course, and ciphering, but very little methodical instruction out of books."

"My own interest in school matters has been in methods of testing school results rather than in policies themselves. I have urged strongly more attention to current school records so devised as to make possible an analysis of experience."

"Questionnaires will never settle great educational problems in controversy. Every school should be a laboratory or should, at least, be preparing materials for educational research. Every county, city, and State superintendent of education should be in position to tell truthfully and legibly the experience of the pupils and teachers under his supervision. The national Commissioner of Education should be able to collect and to interpret facts as to methods and results in all parts of the United States. A small part of the energy that is now expended in squabbling over controverted theories could, if properly directed, insure the truth about what is happening and point the way to what ought to be made to happen."

"We are working out a system of education in the true Anglo-Saxon way, i. e., by experimenting and trying first one thing and then another—now going ahead and now backing up and starting again. The process is slow and painful, and sometimes discouraging, but it suits the genius of our race. Some other peoples would lay down a principle and then work up to it, but we deduce the principle from our experience. But we shall 'get there,' I am confident."

(C) EXTRACTS CONDENSED AND REARRANGED.¹

[The figures refer to the numbered Questions, Summaries, and full Extracts, pp. 63-86.]

Refer to Question 1, page 63.

1 (a).

Most of the schemes for modification come under subsequent heads.

"The medium age of graduation from American colleges is 22 years and 10 months."

1 (b).

"It is a pity that A. B. has been advanced two years in quantity since 1880, rather than in quality."

"Sacrifice the length of the college course rather than that of the professional course."

"The purely preparation stage is too long extended."

"Time should be saved by rapid promotions throughout the elementary school system, and by flexibility in the high school and in the college course."

¹ See Extracts in full, pp. 63-86.

Refer to Question 2, page 65.

2 (a).

"I suspect present results could be had in half the time now taken."

Time is wasted by—

"Lack of medical inspection of school children."

"Unmotivated and ineffective reading, writing, arithmetic, and geography."

"Covering unimportant and unpractical topics."

"Needless multiplication of the subjects taught."

"Hopelessly expending energies upon nonessentials."

"Scattering of pupil resources."

"Routine practice, odds and ends, 'fads and frills' generally."

"Lack of great, strong, enthusiastic, educated teachers."

"Lack of enlightenment regarding the ideals at which education aims."

2 (b).

Time can be shortened by—

"More careful pruning of the elementary program of study."

"Making distinction between first-rate facts and principles and tenth-rate."

"Casting out worthless rubbish."

"Not trying to teach everything that is good."

"Sticking to the elements of the subject."

"Pruning and vitalizing subject matter."

"Confining period of elementary education to mastering the tools of education."

"Not overemphasizing military and political details in history."

"Putting less time on formal reviews."

"Not teaching content studies with the method suitable to the formal subjects."

"Fitting the course of study to the individual."

"Following social and concrete interests."

"Using industrial or manual training to vitalize academic instruction."

"Teaching children relations of what they are doing to ends that they desire to reach."

"Separating the brighter pupils destined to a profession and securing concentration and continuous progress."

"Introducing secondary school work in the higher grades."

"Beginning the study of foreign language, elementary algebra, constructive geometry, and elementary science, thus saving one or two years of the high school."

2 (c).

Provision for vocational schools or studies:

"Providing studies which take the place of the work children formerly did with their parents in the home, or on the farm, or in the shop."

"Placing greater emphasis on the practical aspects of nearly all the subjects."

"Setting apart from one-sixth to one-fourth of the time for some elective interest."

"Putting in manual training, elements of commercial practice, etc."

"Providing vocational training for defective and irregular pupils, who for these and other causes are over age."

"Converting first our legislatures and our boards of education, and next our teachers. (Within one year I have visited the schools in 23 of our largest cities, and I confess complete disheartenment in respect to further development in many of them.)"

"Employing for vocational work one who is a teacher as well as cook, plumber, or dressmaker. (There are almost no such persons at present alive in America.)"

Refer to Question 3, page 68.

3 (b).

"Six years, 12-18; for the first two years simply differentiating the work of the elementary school."

"At 12 specialization should begin either for vocation or college."

"Only two divisions of education that is dominantly cultural should exist, elementary and higher. At present the distinction between the aims of the high school and liberal college does not exist. The student at 20 should be ready to enter a professional course."

3 (c).

Reforms of high school are—

"Simplify course of instruction; it is not necessary to take all the sciences in a high school."

"Adapt subject matter to the pupils' interests, capacity, and mental development."

"Concentrate on a few valuable studies. Cease multiplying subjects."

"Have less educational padding."

"Make college-entrance requirements reasonable."

"Emphasize, like the Greeks, the value of continuous and systematic attention to the development of the human body."

"Banish from the high school elementary attitudes and relationships."

"Emphasize elementary ethics."

"Emphasize character elements."

"More training for character; less of the purely bookish elements."

"More thoroughness, initiative, and moral emphasis."

"Emphasize history, civil government, and economics for citizenship."

"Make more real; less formal."

"More vocational; less textbook work."

"More training for life, citizenship, vocation, and service."

"Organize courses on basis of general vocational activities, with so-called culture coming from the wisdom of knowing what the world is like, what it wants, and what one can do about it."

"Correlate industrial studies with what is known as purely academic studies."

"Recognize the differing cultural, vocational, and social ends of various groups and prepare for these."

"Provide for a classical, a general-scientific, a commercial, a domestic-economy, a manual-training, or a technical course."

"Provide continuation or night schools for special cases."

"Improve quality of teaching."

3 (d).

Provision for vocation schools or studies:

"Adding hours for industrial work without loss to regular high-school work."

"In connection with high schools."

"Vocation studies as electives."

"In the surroundings of the school, rather than under the conditions of apprenticeship."

"Spending one-fourth to one-half the time in vocation work."

"Manual training branching into trade activities, or commercial training, definite, thorough, practical. In some cases part time might be spent in actual shop or factory."

"By grouping electives, by providing in connection with the regular high-school work facilities for training in simple business methods, wood and iron working, use of tools and simple construction of buildings, elementary principles of gardening and farming, sewing and cooking, stenography, etc."

Refer to question 4, p. 73.

4 (a).

Length of college course:

"The German gymnasium and university plan is more rational than our high school, college, and university or professional school. Annex the first two years of the college to the secondary school and allow the students to enter the graduate or professional school of the university at once."

"Professional work should undoubtedly begin at 20 in the majority of cases."

4 (b).

Beginning university at junior year:

"I have recommended (2), and have made a report to our board of trustees urging its adoption here in 1913, the freshman and sophomore years to be required for entrance."

"Keep four years for those not aiming at professional degree, but have last two years for the others count for professional degree."

"In professional and technical schools I believe that the best of general culture will yet be found in the biographies of leaders in the lines studied, and in a history of the development of the occupation and the sciences and social life related to it."

"The chances are in favor of the work being better done if the college course should take on two years of basic science training for medicine, rather than that the medical school should pretend to do the scientific work which is almost certain to be done better in a university laboratory."

"The colleges and universities (so called), especially in the East, but also elsewhere, have deteriorated, if we measure their standards by their educative value. I am only voicing the judgment of the most experienced and thoughtful when I say that fully one-half of all the courses offered and the work done is of almost no educative value whatever. I would, therefore, thoroughly reconstruct the American college from top to bottom; for it retains its name, having lost its character. (1) I would reduce the number and increase the thoroughness in the subjects required for admission; (2) reduce the time to three years, from 17 to 20; (3) reduce the foolish and expensive and needless exhibition of courses offered, making them much fewer and much more thorough; (4) make two-thirds or three-quarters of the curriculum required—compelling such studies in language and literature, mathematics and physical science, and in the psychological sciences as are preparatory and introductory to professional and Ph. D. studies; (5) clean out the whole hotchpotch of courses which have the name, but can never have the substance of true professional studies. Business demands trained and disciplined men; if the colleges would do this, of course their graduates would be in demand in business circles."

4 (c).

Other views of organization of college and university:

"I would save the two years needed for the college course by simplifying the grade work and shortening the time these two years."

"I would suggest the following scheme:

"Elementary school, years of child's life, 6, 7, 8, 9, 10, 11.

"High school, years of child's life, 12, 13, 14, 15.

"College, years of child's life, 16, 17, 18, 19.

"Professional, Ph. D., years of child's life, 20, 21, 22."

"The University of North Dakota gives additional credits for superior work, thereby shortening the time for excellent students."

"Group subjects as minor electives or minor requirements about a major core of subjects in which advanced work must be done, and which may even make the group prelegal, premedical, etc."

"It is easily possible to make the college course so easy by elective courses and avoidance of advanced work that it never forces the choices which should be made, say, even for or against, future study and a learned profession."

"The graduate school loses educational perspective when it assumes to influence the college course."

4 (d).

Value of college for business:

"None. I refer to the typical business man, and not to the great business man. The latter unusual person is in favor of a sane college course in history, languages, sciences, history courses, economics, English, very thorough; German, biology, physics, chemistry, history of philosophy, algebra and geometry with trigonometry. This course is to be taken by a youth who takes part in the social and athletic life as a doer of things. Business men as I know them—manufacturers, wholesalers, railroad men—desire in the young man certain moral qualities—obeying rules and instructions implicitly, promptness and punctuality, arithmetical perfection, rapid and legible handwriting, facility and accuracy in English. I call these 'moral' qualities, and so they seem to me; and they are glad to get also the young man who knows a great deal of geography, of civil government, and of general information. They desire also certain physico-moral qualities, such as cleanliness, neatness, and orderliness. This is to say, they desire health, strength, and discipline. They like frankness, openness, courage toward themselves and discretion toward all others. Our school courses can not develop these qualities for two reasons: Our teachers do not themselves manifest them, and our courses are not designed to produce them."

"Let the college course be sincerely and seriously a part of vocation, too definite to attract the 'elective' students; too hard to attract the man who is too lazy to go to work at a serious business; too exacting to be satisfactorily done by the unmotivated trifler who goes to college, kindheartedly acquiescing in his parents' fond wishes, with a superior indulgence of their ambition."

"They (college men) think, few people (or educated people for that matter) do. They are systematic. They have many bits of knowledge that are useful sometimes when least expected."

"So far as I can judge, business men value highly the training which young men who are going into business get in college."

"Without question the men with college education who have gone into business have soon forged to the front. I have been teaching for a number of years in manufacturing centers, and I know that this condition is true in great manufacturing plants."

Refer to Question 5, page 77.

"Culture should relate to fundamentals in society, business, civilization."

"The problem is one that affects and is affected by social and business conditions."

"A certain amount of conformity to standards set by modern social forces is necessary, else the young graduate will find himself in a world for which he is unprepared."

"That subject is most cultural which is most serviceable to humanity from a dynamic standpoint. All industrial, vocational, and other subjects, when studied and realized in life for a richer life and deeper civilization are cultural and at the same time meet the business interests of life. The business interests think too much is consumed by education without equivalent results. It is very natural for us to interpret with our experiences, which are those of the educational cloister."

"The practical demands of life and the interests of culture are congruent in this, that nothing which is valuable merely for the training it gives is worth pursuing. The instruments of culture are practical means to a large, rich life. Sixteen years of school work preliminary to professional study is unnecessary and hostile to the time interests of culture."

"For the sake of business I would lay far more stress than is now put on the studies that deal with man and history, what man has done—on literature, what man has thought and felt. The best way to adjust students to the intelligent demands of business is to adjust them to the interests of society, and, so far as may be, to the ideals of our civilization."

"Give up archaic ideas regarding a distinction between culture and utility. The university should be a place where everything useful under the sun is taught, and everything useful has a place in the university, and anything useless has no place in it."

"The drift is away from alleged disciplinary effects to studies that combine both discipline and useful information."

"Culture will come best by an enrichment of vocational life. This is real culture. Culture has been a borrowed thing since the Romans began aping the Greeks. Vocational preparation is entirely in harmony with culture in the best sense, and there is doubtless plenty of time for each."

"Business, society, civilization, demand of the world's workers a certain minimum of equipment and maximum of achievement. Society is the loser if academic requirements carry a man past the time of his greatest energy, efficiency, and adaptability."

"There is evidently a need of squeezing a lot of water out of our curriculum."

"The modern demand is for young men and women to get into things while plastic and full of the sense of adaptation."

"It is desirable that the time element should not seem too extended, in order that we may persuade our youth not to yield to the temptation of neglecting education, particularly so-called cultural education."

"Make the training ever richer, better, more effective, rather than shorter."

"I think that the true ideals of our civilization demand high culture and an abundance of time in our education schemes. One great need of our country now is men who can think straight."

Refer to Question 6, page 81.

"If it were possible to reorganize the whole of education in the United States now, I believe that we are more nearly prepared for the German system than we ever would have been before now."

"We have shoved elementary education too far and crowded our universities to the wall."

"There are four units in our educational system; each element magnifies its own functions; and each unit seeks to control the units below itself, and to increase still further the burdens they are carrying."

"I think it desirable that a professional direction be given to the upper half of the four-year college course, or that specialized studies leading toward original research begin in the junior year."

"One correspondent gives instances of students, prepared privately, nonessentials being omitted, who recently entered college at 14 and 15 and graduated successfully."

"I would advocate considerable diminution of the quantity element in college-entrance requirements."

"We must eliminate unnecessary subject matter in elementary subjects; must have different kinds of high schools to meet the needs of different kinds of pupils."

"We are trying to do too much in our colleges, secondary schools, and in our grammar schools."

"I believe the greatest waste is in the dilettante attack on the elementary subjects in the late primary and the secondary schools. A differentiation in the middle of the high school which shall give an optional trend similar to the Gymnasium and Real Schools in Germany might be desirable."

ORGANIZATION OF THE SYSTEM.

"Education to-day from the kindergarten to the university is lacking in effective organization."

"I would have the Commissioner of Education a member of the President's Cabinet; would establish a great national university at Washington; would have a State university in every Commonwealth except in New England, and the incorporated colleges and universities associated with it in the closest relations that can be secured; would have the superintendent of public instruction the head of the system."

"The educational system in a State should be recognized as a department of State government. State systems should have some sort of Federal coordination in a bureau of education at Washington."

"We should have a strong, central (representative) national body whose duty it should be to unify standards for primary, secondary, academic, and professional education."

"Colleges and universities need to be defined by law. It should be possible, as in Germany, for a student to go from any secondary school in any State to any college in the land without loss of time."

VOCATION ELEMENT IN EDUCATION.

"The tendency is to get away more and more from the monastic system and to educate men and women more in real life, for real work. The greatest defect of our educational system is this neglect of those who have to go to work at about 14 years."

"Dropping out of school is because of the violation of the natural impulse to do, keeping it repressed."

"Some way should be found of getting part of one's education while engaged in productive work."

"I would have vocational courses of various kinds branch off at different points from the central line of general culture."

"I would make it possible for a B. A. graduate to go from the Greek recitation room to the blacksmith shop or carpenter shop, and have the one line of work count equally with the other toward the B. A. degree."

"People think a trade school a very good thing for their neighbor's sons."

BETTER TEACHING.

"One deplorable defect in our system is the lack of scholarship, breadth, and training on the part of the elementary-school teacher, and to a large extent on the part of the high-school teacher."

"We need more men in the schoolrooms of the upper elementary and high schools. We need better and many more professional schools for teachers."

"The lack in education is rationality. Instructors have not much to build on. Hence in taking a boy in charge, it is a matter of memory."

"Teachers of the rural schools of the Nation are not as good as a class as they were 25 or 35 years ago."

EDUCATIONAL AIMS.

"We might express our educational aims in the four specific fields of physical, vocational, social, and cultural ends, and then make our adjustments to the needs of varying groups with which society and education must deal."

"No school that is regarded as primarily preparatory to some other school has yet achieved a real educational reason for being. I should like to see the college allowed its place as a divergent limb of higher education whose integrity is to be tested by itself."

ELECTIVE SYSTEM.

Education superficial.

"In our overemphasis at times upon the rights of the individual, we are making serious mistakes in our elective system."

"In general I think education as it is generally pursued in the United States is inclined to be superficial."

Solidarity of system.

"I believe in the unity and solidarity of our educational system. Professional, technical, trade, and continuation schools should be as closely coordinated with the elementary schools, high schools, and colleges as possible."

MOTOR EDUCATION.

"I have a suspicion strong enough almost to amount to a conviction that book work up to the age of 13 or 14 ought to be almost abolished, and that the basis of education up to that age should be almost exclusively motor—dancing, games, music, drawing, manual training of every sort, with reading and writing, taught early of course, and ciphering, but very little methodical instruction out of books."

MEANS OF INVESTIGATION OF PROBLEMS.

"Questionnaires will never settle great educational problems in controversy. Every school should be a laboratory, or should at least be preparing materials for educational research. Every county, city, and State superintendent of education should be in position to tell truthfully and legibly the experience of the pupils and teachers under his supervision. The national Commissioner of Education should be able to collect and to interpret facts as to methods and results in all parts of the United States."

"I urge strongly more attention to current school records, so devised as to make possible an analysis of experience."

(D) BIBLIOGRAPHY.

[Prepared by the U. S. Bureau of Education for this Report. The figures refer to the numbered questions, summaries, and extracts, p. 63-86.]

EDUCATION—WASTE.

2 (a)

Alan, John S. Saving time in school. Ohio educational monthly, 61: 557-62, November 1912.

Atkinson, Daniel B. The conservation of our most valuable resources. Wyoming school journal, 7: 133-38, March 1911.

Baker, James H. Economy of time in education. Report of progress. Colorado school journal, 25: 24-27, September 1909.

The N. E. A. committee of five. Dr. Baker, *chairman*.

Punker, Frank F. The elimination of waste in education. Sierra educational news, 6: 23-29, March 1910.

Chamberlain, Arthur H. The lost chord in education. In Southern California teachers' association. Council of education. Report, 1909.

Clark, J. V. Leaks in the school system. New Mexico journal of education, 8: 35-39, January 1912.

Coffman, Lotus D. Mobility of teaching population in relation to economy of time. School and home education, 32: 292-96, April 1913.

- Coontz, J. A. How to reduce waste in education. *Missouri school journal*, 27: 242-47, June 1910.
- Elson, W. H. Waste and efficiency in school studies. *American school board journal*, 44: 25-26, March 1912.
- Judson, Harry Pratt. Waste in educational curricula. *School review*, 20: 433-41, September 1912.
- Maine. State superintendent of public schools. The elimination of waste in education. *In his Report*, 1909. Waterville, Sentinel publishing co., 1910. p. 37-49.
- Parris, Thomas G. Devices for saving the time of the teacher. *Journal of education*, 77: 129-30, January 30, 1913.
- Seely, Levi. Waste in educational processes and administration. *Normal instructor*, 16: 19, 47, December 1906.
- Thompson, Frank E. Economy of time in elementary education. *Colorado school journal*, 28: 10-12, November 1912.
- Wallin, J. E. W. The rationale of promotion and elimination of waste in the elementary and secondary schools. *Journal of educational psychology*, 1: 445-66, October 1910.

ELEMENTARY EDUCATION—SHORTENING.

2 (b).

- Balliet, Thomas M. Saving of time in elementary and secondary education. *In National education association. Journal of proceedings and addresses*, 1903. p. 317-22.
- Cambridge, Mass. School committee. Six years: Schools so classified that pupil may complete grammar school course in four or five years. *In its Report*, 1908. p. 45-51.
- Colorado teachers' association. Committee. Relation of our educational ideals to present-day civilization. *School journal*, 74: 193-95, 218-19, February 23, March 2, 1907.
- Dewey, John. Shortening the years of elementary schooling. *School review*, 11: 17-20, January 1903.
- Eliot, Charles W. Shortening and enriching the grammar school cause. *In National education association. Journal of proceedings and addresses*, 1892. p. 617-25.
- Greenwood, James M. A seven-year course for elementary schools and a five-year course for secondary schools. *In National education association. Journal of proceedings and addresses*, 1907. p. 290-94.
- Hartwell, Charles S. Promotion by subject and three-year courses. *In New York state teachers' association. Proceedings*, 1906. p. 21-27.
 "School education should not be divided into three periods of four years each . . . but into two periods of six years each."
- Lytle, E. W. Should the twelve-year course of study be equally divided between the elementary and secondary schools? *In National education association. Journal of proceedings and addresses*, 1905. p. 428-33.
- National education association. Report of the Committee on an equal division of the twelve years in the public schools between the district and high schools. *In its Journal of proceedings and addresses*, 1907. p. 705-10.

ELEMENTARY SCHOOLS—VOCATIONAL TRAINING.

2 (c).

- Adams, J. B. The working girl from the elementary school in New York. *Charities and The commons*, 19: 1617-23, February 22, 1908.
 A study of 78 girls who left school before completing the elementary grades. Throws light on the advantages of vocational education.

- Bailey, Henry Turner. Elementary schools as a factor in industrial education. *Manual training magazine*, 11: 297-301, April 1910.
- Bain, A. Watson. Preparation in the elementary school for industrial and domestic life. *Elementary school teacher*, 9: 167-77, December 1908.
 "The course of study suggested is frankly and primarily planned as a training for vocation; but it would be a preparation for avocation as well."
- Baldwin, William Alpheus. Industrial-social education for the primary and grammar school grades. In *Eastern manual training association. Proceedings*, 1904. Philadelphia, Pa., Published by the Association, 1905. p. 104-12.
- *and others*. Industrial-social education. Springfield [Mass.] Milton Bradley company, 1907. 147 p. illus. 8°.
 The work of the Hyannis normal school in the industrial training of the grade children, Hyannis public school.
- Bonser, Frederick G. Vocational work below the high school in its bearing on the growing ideal interests of children. In *Illinois state teachers' association. Journal of proceedings*, 1908. Springfield, Ill., Illinois state journal co., 1909. p. 153-58.
- Burnham, Frederic Lynden. Industrial education in the public schools. In *Massachusetts. Board of education. Annual report*, 1906-7. Boston, Wright & Potter printing co., 1908. p. 253-64 (Appendix D)
- Cheney, Howell. The educational needs of the larger towns and cities. In *Connecticut. Board of education. Report*. Hartford, Published by the State, 1909. p. 547-60.
 "The industrial training can not be the predominating discipline until about a sixth grade is reached. Even then it should be designed especially for those . . . who go [no] further with a general intellectual course."
- Crawshaw, Fred Duane. Manual training in the Franklin school. [Peoria, Ill.] In *Western drawing and manual training association. Report*, 1905. p. 86-100.
 Discussion. p. 101-28.
 Clay-work, sewing, tool-work, etc., in the grades.
- Dodd, Alvin E. Better grammar grade provision for the vocational needs of those likely to enter industrial pursuits. *Manual training magazine*, 11: 97-107, December 1909.
- Dopp, Katherine Elizabeth. The place of industries in elementary education. [Rev. ed. Fourth impression] Chicago [University of Chicago press] 1909. 270 p. 8°.
 Contains discussions regarding the significance of industrial epochs; the origins of attitudes that underlie industry; and practical applications. Philosophical in character.
- Downing, Augustus S. The meaning of industrial education to the elementary schools. In *National education association. Journal of proceedings and addresses*, 1909. p. 380-85.
 Discusses the course of study; vocational education, etc.
- Draper, Andrew Sloan. The adaptation of the schools to industry and efficiency. In *National education association. Journal of proceedings and addresses*, 1908. p. 65-78.
 Reprinted.
 "We can not escape the fact that the elementary schools are wasting time, and that the lack of balance in the educational system is menacing the balance of the country . . . The demand that the programs of the schools shall be more rational and the work of the teachers shall fit children for definite duties with more exactness is heard on every side."
- Elson, William H. *and* Bachman, F. P. Different courses for elementary schools. *Educational review*, 39: 357-64, April 1910.
 Work in Cleveland, Ohio.
- Haney, James Parton. Vocational work for the elementary school. *Educational review*, 34: 335-46, November 1907.
 Outline of course: p. 343-46.
 Reprinted.

- Harris, James H. Wage earning among grammar grade boys. *American school board journal*, 45:13, November 1912.
An effort to discover how many boys in the Dubuque (Iowa) elementary schools were earning money in out-of-school employments.
- Harvey, Lorenzo Dow. Manual training in the grades. *Elementary school teacher*, 7:390-407, March 1907.
- Heeter, S. L. Economy of time and energy in treating the course of study. *Educational foundations*, 20:24-32, September 1908.
"We must decrease the school hours so far as formal studies in the grammar schools are concerned for certain boys and girls forced . . . to go early to work, but increase the time correspondingly for such pupils to be given to industrial training and commercial subjects; . . . ending possibly in a closely articulated elementary system of apprenticeship between the grammar schools and leading industrial enterprises."
- Indiana. Department of public instruction. Industrial education. *In* 24th biennial report of the State superintendent of public instruction for the school years ending July 31, 1907, and July 31, 1908. Indianapolis, 1908. p. 417-26.
Contains account of the development of industrial education in the public schools of Indiana.
- Johnson, Ben W. Industrial education in the elementary school. *School exchange*, 4:338-46, March 1910.
- Kent, Ernest B. The elementary curriculum and the industries. *Education*, 30:582-90, May 1910.
- Elementary school and industrial occupations. *Elementary school teacher*, 9:178-85, December 1908.
Presents a plan for developing "vocational choice" by the pupil of the elementary school—with a scheme for using school shops for special vocational classes.
- Kilpatrick, Van Evrie. Department of elementary school problems: vocational training in the elementary school. *Education*, 30:448-53, March 1910.
- Leavitt, Frank M. The Cleveland elementary industrial school. *Vocational education (Peoria)* 1:10-21, September 1911. illus.
- Industrial education in the elementary schools. *Manual training magazine*, 9:377-84, June 1908.
For school training rather than education through private business interests.
- The need, purpose, and possibilities of industrial education in the elementary school. *Elementary school teacher*, 13:80-90, October 1912.
Contends that elementary industrial work will be most effective when conducted under the direction of the manual-training authorities.
- Martin, George Henry. Industrial education and the public schools; an address before the Massachusetts teachers' association, Boston, November 27, 1908. Boston, Wright & Potter printing co., state printers, 1908. 20 p. 8°.
An excellent presentation of the elementary school problem of industrial education.
- Mattoon, J. C. The common schools from an industrial standpoint. *In* Southern educational association. *Journal of proceedings and addresses*, 1908. p. 530-40.
- Mead, G. H. Industrial education, the workingman and the school. *Elementary school teacher*, 9: 369-83, March 1909.
"Two great facts stand out. One is that we are forced to reconstruct our whole apprenticeship training. . . . The other is that apprenticeship provides an adequate and indeed almost the only adequate method of instructing children."
- Michigan. Superintendent of public instruction. Industrial and vocational training in the public schools. *In* his Annual report, 1909-10. Lansing, Michigan, Wynkoop-Hallenbeck-Crawford co., 1910. p. 14-25. (Bulletin no. 2)
- Minneapolis commercial club. Educational committee. A plea for the rearrangement of the public school system of the city of Minneapolis [1910] folder.
A. E. Zofine, chairman.
- Plaisted, Laura L. Educational handwork. *In* her The early education of children. Oxford, Clarendon press, 1910. p. 309-49. illus.
- Row, Robert Keable. The educational meaning of manual arts and industries. Chicago, Row, Peterson and company [1909] 248 p. illus. diags. 8°.

Sargent, Walter. Fine and industrial arts in elementary schools. Boston, New York [etc.] Ginn and company [1912] 132 p. illus. 8°.

CONTENTS.—1. Educational and practical values of the fine and industrial arts. 2. A survey of the progression of work through the grades. 3-7. Grades I to VIII.

Snedden, David S. Differentiated programs of study for older children in elementary schools. *Educational review*, 44: 128-39, September 1912.

In the estimation of the writer, "a complete scheme of secondary education should include not only one or more of the four-year programs as now commonly found but also flexible two-year programs of study, all containing English literature, English expression, general science, social science, and an option from one of the four great fields of practical arts study—namely, agriculture, industrial and practical arts, and commerce."

Snowden, Albert A. Industrial education in public school systems. With special reference to grades below the high schools. *In* New Jersey state teachers' association. *Proceedings*, 1908. p. 19-25.

Spencer, Anna Garlin. What can the grade school do for industrial education. *In* National society for the promotion of industrial education. *Proceedings* [1909] p. 148-56.

HIGH SCHOOLS—LENGTH OF COURSE.

3 (a).

Balliet, Thomas M. and Aldrich, G. L. The time limit of secondary education. *Educational review*, 25: 433-54, May 1903.

Brown, J. Stanley. In what respects should the high school be modified to meet twentieth-century demands? *School review*, 12: 563-68, September 1904.

——— Extended high school. *School review*, 14: 66, January 1906.

Cleveland. Board of education. The Cleveland technical high school. *In its* Annual report, 1907. Cleveland, Board of education, 1907. p. 84-99. plans. illus. Course of study, boys, p. 98; girls, p. 99.

On the four-quarter plan, four years' work in three years.

Garber, John Palmer. The high school. [Short course] *In his* Annals of educational progress in 1910. Philadelphia and London, J. B. Lippincott co., 1911. p. 145.

Georgia educational association. Committee on high schools. Report. Macon, 1911. 12 p. 8°.

Contains suggestive courses for two, three, and four-year high schools.

Greenwood, James M. Seven-year course for elementary schools and five-year course for secondary schools. *Education*, 27: 550-55, May 1907.

Hand, William H. High-school manual. Columbia, S. C., University of South Carolina, 1907. 91 p. 12°. (Bulletin of the University of South Carolina, Part XI, October 1907)

Suggestive courses of study for two, three, and four-year high schools: p. 7-15.

Hartwell, Charles S. Economy in education. *Educational review*, 30:159-77, September 1905.

Illinois university. A scheme for the more complete correlation of the two and three year high schools with accredited high schools and academies. Urbana, University of Illinois, 1908. 5 p. 12°. (University of Illinois bulletin, vol. V, no. 12)

Sachs, Julius. The elimination of the first two college years: A protest. *Educational review*, 30:488-99, December 1905.

Suggested courses for three-year high school. *In* Georgia. Dept. of education. Thirty-ninth annual report. Atlanta, Ga., C. P. Byrd, state printer, 1911. p. 186-94. 8°.

The two-year high school course [Chicago] *Sierra educational news*, 7:43, September 1911.

Two-year high school course in New York. *American school board journal*, 37:24, August 1908.

HIGH SCHOOLS—SIX-YEAR PLAN AT WORK.

3 (e).

- Brown, J. Stanley. Joliet township high school. School review, 9:417-32, September 1901. illus.
- (Joliet, Ill., Township high school) The six-year high school at work. School review, 14:609-10, October 1906.
- Hines, L. N. The "six-and-six" plan in the public schools of Crawfordsville, Ind. American school board journal, 44:14, February 1912.
- Hoekje, John C. The six-year high school in practice. American schoolmaster, 6:25-28, January 1913.

HIGH SCHOOLS—REFORM.

3 (c).

- Baldwin, W. A. The high school: its weaknesses and suggested modifications. Report made to the New England association of school superintendents. Boston, New England publishing company, 1910. 12 p. 12°.
- Davis, N. F. Is the present mode of granting certificate-rights to preparatory schools satisfactory? School review, 15:145-52, February 1907.
- Parlin, Charles C. The twentieth-century high school. [Oshkosh, Wis., Castle Pierce press, 1910] 16 p. 12°.
- Pierce, E. C. Reforms in the curriculum of the secondary school. School review, 16:265-66, April 1908.
- Robinson, E. Van D. Waste in high-school education. School review, 8: 422-26, September 1900.

VOCATIONAL TRAINING.

3 (d).

- Brown, James Stanley. Commercial and industrial high schools versus commercial and industrial courses in high schools. In North central association of colleges and secondary schools. Proceedings, 1908. Chicago, Published by the Association, 1908. p. 136-43.
- *and others.* The place of vocational subjects in the high school curriculum. In National society for the scientific study of education. Fourth yearbook. Bloomington, Ill., Pantagraph printing and stationery company, 1905. pt. 2: 9-52.
- Brown, John Franklin. Vocational training [in the high school] In his The American high school. New York, The Macmillan company, 1909. p. 369-73.
- Burnham, Frederic Lynden. Supervision and the teaching of the manual arts in the high school. Report. In Massachusetts. Board of education. Annual report, 1907-08. Boston, Wright & Potter printing co., 1908. p. 267-96. (Appendix D.)
- Call, Arthur Deerin. The specialized or vocational vs. the composite high school. In National education associations. Journal of proceedings and addresses, 1912. p. 174-80.
- Also in American school board journal, 45: 8-9, October 1912.
- Carman, George N. Promotion of industrial education by means of public high schools. Western journal of education (Ypsilanti) 2: 1-12, January 1909.
- Enlargement of paper read at the National society for the promotion of industrial education, Atlanta, 1908, under title: "Promotion of industrial education by means of trade schools."
- Crawshaw, Fred D. What can the high schools do better to help the industries? Manual training magazine, 13: 193-204, February 1912.

Davenport, Eugene. Industrial education with special reference to the high school; an address. Urbana, Ill. [1908] 20 p. 8°.

This address was read at the high school conference, University of Illinois, November 20, 1908.

Dean Arthur D. Industrial education in its relation to the high school problem. Syracuse, N. Y., C. W. Bardeen, 1910. 34 p. 12°.

De Garmo, Charles. Training for industrial efficiency in the high school. *In* New York (City) high school teachers' association. Yearbook, 1906-1907. p. 21-30.

Denbigh, John H. Some problems of the secondary school. *In* Schoolmasters' association of New York and vicinity. Annual report, 1908-1909. p. 7-17.

Discussion: p. 17-20.

"Total neglect of either the vocational or social aims must equally surely result in failure to adapt the school to the real needs of a community."

Evans, Charles S. Technical training in the Berkeley high school. Berkeley, Cal., 1910. [22] p. illus. 16°. ([Berkeley, Cal., Board of education] Pamphlet no. 4)

Fant, J. C. A new feature in school work. *Mississippi educational advance*, 2: 12-14, March 1913.

At McComb, Miss., the superintendent of schools has perfected an arrangement with the master-mechanic of Illinois R. R. Co.'s building and repair shops by which boys may take their high school course with extended practical work in the shops. The arrangement is founded upon the plan of having two boys act as a unit, so that while one is in school the other is in shop, and vice versa. For their shop work the boys are paid, each making from \$15 to \$18 per month.

National education association of the United States. Subcommittee on industrial and technical education in the secondary school. Report. *In its* Journal of proceedings and addresses, 1910. p. 731-66.

New Hampshire. Superintendent of public instruction. The influence of secondary schools upon movements of population and upon vocation. *In his* Report . . . Concord, 1908. p. 261-70.

Reprinted.

——— Work in secondary schools having industrial courses. *In his* Report. Concord, 1908. p. 280-302. illus.

Nye, L. B. Rational vocational work in smaller high schools. *Pennsylvania school journal*, 59: 502-506, April 1911.

The vocational training of sixteen high schools, in reply to circulars of inquiry.

Person, Harlow Stafford. Ideal organization of a system of secondary schools to provide vocational training. *School review*, 17: 404-16, June 1909.

Rynearson, Edward. Cooperation of the business men of Pittsburg with the commercial department of its high school. *School review*, 18: 333-38, May 1910.

Sargent, Walter. The place of manual arts in the secondary schools. *School review*, 18: 99-107, February 1910.

Sloan, Percy H. The organization of the arts in the high schools. *Educational bi-monthly*, 4: 182-90, February 1910.

Toledo, Ohio. Board of education. New cosmopolitan high schools. *In its* Report, 1908-09. p. 71-79. illus. plans.

A complete system of differentiated courses, cultural and vocational, "offering all three lines of academic, manual and commercial training, and placing equal emphasis upon each."

Upton, R. R. High school attendance as influenced by commercial and technical training. *In* Illinois state teachers' association. Journal of proceedings, 1902. Springfield, Ill., Phillips bros., state printers, 1903. p. 127-33.

Wightman, H. J. Technical courses in high schools. *School journal*, 74: 248-51, March 9, 1907.

"In the type of course which I am advocating, the value of each thing made lies in the fact that it has a definite purpose in the later work and life of the pupil."

HIGH SCHOOLS—SIX-YEAR PLAN.

3 (b).

- Bolton, Frederick E. [The high school course of study] *In* National conference on secondary education . . . Northwestern university, 1903. Evanston, published by the university, 1904. p. 68-76.
- Bower, Ray F. Reorganization of the grades and high school. *Wyoming school journal*, 9: 243-46, May-June 1913.
- Breitwieser, J. V. The gap between the grades and the high school. *Colorado school journal*, 28: 22-24, May 1913.
- Brown, James Stanley. In what respects should the high schools be modified to meet twentieth century demands? *School review*, 12: 563-68, September 1904.
- Present development of secondary schools according to the proposed plan. *School review*, 13: 15-18, January 1905.
- Buttrick, Harold E. The true function of the evening high school. *School review*, 12: 588-603, September 1904.
- Harper, William Rainey. Development of high schools into junior colleges. *In his* The prospects of the small college. Chicago, University of Chicago press, 1900. p. 38-39.
- The high school of the future. *School review*, 11: 1-3, January 1903.
- "The secondary school to include the first two years of college work." *Discussion*: p. 17-20.
- The situation of the small college. *In his* The trend in higher education. Chicago, University of Chicago press, 1906. p. 349-90.
- Hedgepeth, V. W. B. Six-year high-school plan at Goshen, Ind. *School review*, 13: 19-23, January 1905.
- Lange, Alexis F. The unification of our school system. *Sierra educational news*, 5: 9-14, June 1909.
- Six-year course: Caminetti bill, California school laws, 1909, paragraph 1750.
- [Oxford, Miss., adds an eleventh grade, and puts in two years of Greek] *Mississippi school journal*, 13: 21, October 1908.
- Van Dyke, J. A. Should the course of secondary education be extended to include the work in the last two years of the grades and the first two years of the college? *In* Minnesota educational association. *Proceedings*, 1902-3. St. Paul, Minn., McGill-Warner co., 1903. p. 134-39. diags.
- Wheeler, George. The six-year high school. *North Carolina education*, 7: 8-9, 1913.
- ——— Pennsylvania school journal, 61: 280-283, January 1913.

COLLEGE COURSE—LENGTH.

4 (a).

- Brown, Elmer E. Length of the baccalaureate course and preparation for the professional schools. *In* National education association. *Journal of proceedings and addresses*, 1903. p. 489-95.
- Butler, Nicholas Murray. The American college. *Educational review*, 25: 11-20, January 1903.
- Length of the baccalaureate course and preparation for the professional schools. *In* National education association. *Journal of proceedings and addresses*, 1903. p. 500-4
- California. University. Five years' course. *Register*, 1908-9. p. 69-70.
- Eliot, Charles W. Length of the baccalaureate course and preparation for the professional schools. *In* National education association. *Journal of proceedings and addresses*, 1903. p. 496-500.
- Foster, William T. Gentlemen's grade. *Educational review*, 33: 386-392, April 1907.

- Hartwell, Charles S. Economy in education. *Educational review*, 30: 159-177, September 1905.
- MacLean, James A. The length of the college course. *In National association of state universities. Transactions and proceedings*, 1907. Bangor, Me., Bangor cooperative printing co. p. 59-65.
- Massachusetts institute of technology. Five-year undergraduate courses. *Bulletin-programme*, June 1910. p. 36-38.
- Thomas, M. Carey. The college. *Educational review*, 29: 62-84, January 1905.

COLLEGE COURSE—EXPERIMENTS IN SHORTENING.

4 (e).

- Eliot, Charles W. *et al.* Three-year college course. *School review*, 5: 720-28, December 1897.
- Hall, E. H. College work and the A. B. in three years. *Harvard graduates' magazine*, 9: 330-37, March 1901.
- Hart, A. B. Actualities of the three-year A. B. degree. *Harvard graduates' magazine*, 10: 201-7, December 1901.
- Stickney, Albert. Considerations on new Harvard methods. n. d. 32 p.
Printed for private distribution.
- Two-year college course. *Outlook*, 72: 394-95, October 18, 1902.
- Current literature, 33: 517, November 1902.

TIME ELEMENT IN EDUCATION.

5.

- Andrews, E. Benjamin. Time and age in relation to the college curriculum. *Educational review*, 1: 133-46, February 1891.
- Cincinnati, Ohio. Superintendent of schools. Percentage of time given to each study in different cities. *In his Annual report*, 1909. p. 38.
Eleven leading cities.
- Cleveland, Ohio. Superintendent of schools. [Time allotment of studies in the elementary grades] *In his Annual report*, 1908, p. 34, 36, 39, 41.
In 10 other cities: p. 36, 39.
- Economy of time in education. Symposium. *In National education association. Journal of proceedings and addresses*, 1912. p. 507-26.
Articles by J. H. Van Sickle, H. B. Wilson, F. E. Thompson, and J. H. Francis.
- Hartwell, Charles S. Economy in education. *Educational review*, 30: 159-77, September 1905.
- Lommen, C. P. The time element in education. *South Dakota educator*, 20: 5-10, March 1907.
- Time in education. *Outlook*, 56: 425-26, June 12, 1897.
- McMurry, Frank M. What omissions are advisable in the present course of study, and what should be the basis for the same? *In National education association. Department of superintendence. Journal of proceedings and addresses*, 1904. p. 194-202.

PHYSIOLOGICAL AGE.

- Crampton, C. Ward. The influence of physiological age upon scholarship. *Psychological clinic*, 1: 115-20, June 15, 1907.
- Physiological age—a fundamental principle. *American physical education review*, 13: 141-54, 214-27, 268-83, March, April, May 1908.

CULTURE ELEMENT IN EDUCATION.

5.

- Armstrong, A. C. German culture and the universities. *Educational review*, 45: 325-38, April 1913.
- Burgess, I. B. Cultural motive in the school. *Education*, 28: 574-84, May 1908.
- Dexter, Edwin Grant. High-grade men: in college and out. *Popular science monthly*, March 1903.
- Garrison, W. E. A modern ideal of culture. *New Mexico journal of education*, 6: 10-15, February 15, 1910.
- Henderson, Charles H. Education and the larger life. Boston, Houghton, Mifflin & co., 1902. 386 p.
- Miller, H. J. Value of a university education. *Westminster review*, 168: 327-28, September 1907.
- Morris, Edward P. The college and the intellectual life. *Yale review*, 2: 456-69, April 1913.
- Penniman, Josiah H. What can our schools and colleges do in the way of imparting culture as distinguished from knowledge? *In Schoolmasters' association of New York and vicinity. Annual report, 1901-1903.* p. 63-74.
- Rybolt, D. C. Education for culture. *Ohio educational monthly*, 61: 303-7, July 1912.
- Schurman, Jacob G. Liberal culture: Athenian and American. *In Schoolmasters' association of New York and vicinity. Annual report, 1905-1906.* p. 84-94.
- Thwing, Charles F. The pre-eminence of the college graduate. *In his Within college walls.* New York, Baker & Taylor co. [ca. 1893] p. 156-81.

PROFESSIONAL SCHOOLS—ENTRANCE REQUIREMENTS.

4 (b) (3) *See also* 4 (b) (1) and 4 (b) (4).

- Butler, Nicholas Murray. Professional schools and the American college. *Educational review*, 24: 503-17, December 1902.
 Argues for entrance to professional schools, after two years of college.
 See also *Journal of education*, 67: 471, April 23, 1908.
- Eliot, Charles W. The requirements for admission to professional schools. *In Association of American universities. Journal of proceedings and addresses*, December 29-31, 1902. Published by the association, 1903, p. 30-35.
 Discussion: p. 43-52.
- Yale university. President. [Should professional schools require collegiate degree as entrance condition] *In his Report, 1901-1902.* p. 13-29.

COLLEGE TRAINING AND THE PROFESSIONAL SCHOOL.

4 (b) (5).

- Baldwin, S. E. The readjustment of the collegiate to the professional course. *In U. S. Bureau of education. Report of the Commissioner for the year 1899-1900.* v. 1. p. 615-28.
- Benedict, A. L. Time allowance in the combined collegiate and medical course. *Bulletin of the American academy of medicine*, 6: 121-54, 343-46, December, 1902, June 1903.
 Reports of committee.
- Bryan, W. D. Combined courses in academic and professional work. *In Association of American universities. Journal of proceedings and addresses*, 1910. p. 17-25.
 Discussion: p. 25-34.
 Resolutions submitted: p. 24-25.

- Butler, Nicholas Murray. On permitting students to take studies in professional schools while pursuing a regular undergraduate course. *In* College association of the United States and Maryland, 1891. p. 35-38.
- Dodson, John M. The relation of the university to the medical and other professional schools. *Northwestern lancet*, September 1903.
- Kingsbury, J. T. Should two years in college work be required in preparation for professional courses? *In* National association of state universities . . . Transactions and proceedings, 1907. Bangor, Maine, Cooperative printing co. p. 80-86.
- Lowell, A. Lawrence. College studies and professional training. *Educational review*, 42: 217-233, October, 1911.
A statistical study in Harvard university. Illustrated with graphic statistics, etc.
- Plantz, Samuel. The college as a preliminary to the professional course. *Wisconsin journal of education*, 40: 88-90, March 1908.
- Vander Veer, Albert. Should the regents register college courses as the equivalent of the first year in a medical school. *In* New York (State) university. 42d convocation. p. 223-36.
Advocates seven years for the two degrees.

HIGHER EDUCATION AND BUSINESS PURSUITS.

4 (d).

- Converse, J. H. Higher education for business pursuits and manufacturing. *Annals of the American academy of political and social science*, 28: 115-23, July 1906.
- Elliott, Howard. The college man in business. *North Dakota university. Quarterly journal*, March 1911. p. 130-34.
Statistical.
- Foster, William T. The relation between college studies and success in life. *Science*, n. s., 32: 701-7, November 18, 1910. tables.
Electives, etc.
See also Administration of the college curriculum. Boston, Houghton Mifflin co. [c1911] by same author.
- Hapgood, H. J. College men in business. *Annals of the American academy of political and social science*, 28: 58-69, July 1906.
See also *World to-day*, 11: 827-31, August 1906.
- Parry, David M. *and others*. What can a university contribute to preparation for business life? *In* Michigan political science association. Publications, vol. 5. p. 95-130.
- Patten, Simon N. University training for business men. *Educational review*, 29: 217-33, March 1905.
- Person, Harlow S. The college graduate in trade and industry. *Education*, 27: 589-600, June 1907.
- Scott, William Amasa. Education of business men. *World to-day*, 9: 878-82, August 1905.
- Thomas, M. Carey. What college men do. *School journal*, 74: 589, June 8, 1907.

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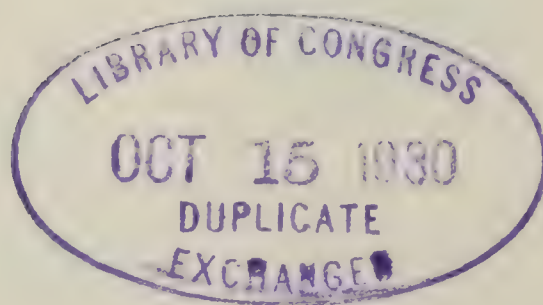
THE ELEMENTARY INDUSTRIAL SCHOOL OF CLEVELAND, OHIO

By W. N. HAILMANN

PROFESSOR OF THE HISTORY OF EDUCATION
CLEVELAND NORMAL TRAINING SCHOOL



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THE ELEMENTARY INDUSTRIAL SCHOOL OF CLEVELAND, OHIO.

In his report for the year 1908, Dr. Andrew S. Draper, commissioner of education of the State of New York, established the fact that current school systems still confine themselves too exclusively to preparation for professional life; that, even where they have consented to consider the claims of commerce and of certain technical pursuits, the aim lies toward preparation for positions of management and control; and that neither in the elementary schools nor elsewhere do the trades and the industrial life of the people receive adequate attention.

It is gratifying to note that this inadequacy is more and more keenly felt and that efforts to supplement it are becoming more and more pronounced among public-spirited citizens, among employers and workers, parents and educational leaders. We meet these efforts in the form of private and public trade schools, apprentice schools, continuation schools, industrial schools, and in a variety of provisions for so-called vocational guidance; most hopefully, however, in distinct propositions and experiments looking to a reorganization of the public school with a view of meeting this need without loss, but rather with gain, to other vocational interests and to general liberal culture.

Among these experiments, the Elementary Industrial School of Cleveland challenges more than passing interest, not so much because of vastness of plan or results, but because of the direct bearing of its work upon certain fundamental shortcomings and traditional one-sidednesses of current systems.

Its organization was hastened by certain statistical data collated under the direction of Supt. W. H. Elson. He reports that, of the children—

enrolled in the first grade of the elementary schools for the 10 years between 1892-93 and 1901-2, 3 out of 10 went no further than the fourth grade, 4 out of 10 withdrew before reaching the fifth grade, 5 out of 10 failed to enter the sixth grade, 6 out of 10 failed to reach the seventh grade, while practically 3 out of every 4 were lost to the school before attaining the eighth grade.

Again, he says:

Taking the schools of Cleveland as a whole, it is found that of those entering the first grade 95 per cent leave without finishing the high school, 50 per cent withdraw before reaching the fifth grade, and 75 per cent before reaching the eighth grade, while of those who enter the high school 32.64 per cent leave before the second year and 64 per cent drop out before graduation.

With reference to retardation, he reports:

Our records show that in the Cleveland schools last year (1908-9) 17,984 children were behind their grades with respect to age, or 27.6 per cent, while of the total number of retarded pupils 57.12 per cent were behind one year, 26.67 per cent two years, 10.33 per cent three years, and 5.86 per cent four or more years. It appears also that every eighth child was during the past year going over his work for the second time, or was a "repeater." In the elementary schools alone there were 8,650 repeaters, or 14.51 per cent of the total registration.

Further analysis of such failure revealed the fact that in the majority of instances these failures were due not so much to lack of ability on the children's part, but rather to failure to consider the needs of hand-minded or practical-minded children on the part of the current system in its one-sided attention to the language-minded and imaginative, in its excessive reliance upon the imagery of words and abstractions rather than upon the actualities of concrete life, both in learning and in doing.

Elsewhere it had been observed that hand-minded children who had gained in their classes the reputation of dullards, and who had themselves lost faith in their powers, were restored to confidence and learned to make satisfactory progress even in previously distasteful subjects, when opportunity came to them to exercise their powers in matters that appealed to their mental constitution and seemed to them worth while. If such children are to be afforded an opportunity to make the best of themselves, they must be approached from the side of the practical; they must learn by doing and in order to do. Thus alone can they be led to the "cultural," to the discovery of the inestimable value of knowledge, of science, of art, and even of the pursuit of these for their own sake. Thus alone can the school hope to place them in full possession of their human inheritance, to reach and to stir into full self-active life every phase of their mental constitution.

THE OPENING OF THE SCHOOL.

Such considerations led the school authorities to undertake the establishment of an Elementary Industrial School in the fall of 1909, as an experiment in the direction indicated. Primarily, by means of suitable differentiation in the course and character of the work with the beginning of the seventh grade, it was to afford practical-minded "dullards" opportunity to find themselves and thus to open

a way for checking the flood of waste from apparently hopeless retardation and failure, and incidentally, perhaps, for closer adjustment of the school system as a whole to the needs of the new industrial age.

The school was opened in a commodious 10-room building connected with the Brownell School, a central location. Its advantages were extended to children not under 13 years of age and stranded in the sixth grade and not less than two years behind grade. The principals of the elementary schools were requested to recommend a given number of boys and girls who in their judgment would be benefited by the transfer. The consent of parents was obtained chiefly on the plea that the children would have a better chance for progress and promotion.

In this way a school of 93 boys and 43 girls was organized in eight classes, five for the boys and three for the girls. For exceptional reasons a few younger children had been admitted; so that their ages ranged from 12 to 17; the average age of the boys was 14.3 years, that of the girls 14.1 years; 37 of the girls and 63 of the boys were foreign-born or had foreign-born parents. All had been rather unsuccessful in their school work, had lost interest in the studies and confidence in their abilities. They were reported to be poor in arithmetic, in writing, in spelling, in all their book work; and, in a number of instances, they had been difficult to control.

The school, as already indicated, was not to be a mere vocational or trade school. Industrial considerations were, indeed, to lead, and the practical tendencies of the pupils were to be appealed to and emphasized both in handwork and in academic work; throughout they were to revel, as it were, in practical efficiency. Yet, at the same time, no effort was to be spared to touch and stir the deeper springs of personality, of manly and womanly qualities in the pupils, to lead them to an appreciation of the social and æsthetic value of work, to spiritualize their growing efficiency with elements of good will and joy.

TIME SCHEDULE AND COURSE OF STUDY.

It was decided to extend the school day from 8.30 to 3.30. This time was divided into nine periods, one of which was assigned to luncheon. This left 40 periods per week for instruction and practice. One-half of these were devoted to English, mathematics, geography—history—the two in close correlation—and to hygiene of a thoroughly practical character. The other half were given to manual and industrial work, to domestic economy and gymnasium practice. There were shower baths, a swimming pool, and an auditorium for assembly exercises—rhetorical, musical, stereoscopic, and general.

Instruction is departmental; the sexes are segregated, and no attempt is made to give classes of boys and girls the same treatment in any subject of instruction.

In closer detail the course of study, as elaborated up to the present, deals with the following topics:

English.—Three-fifths of the time is devoted to reading, with stress upon thought study, upon material that will meet the needs of the classes, upon the memorizing of suitable selections, and upon catalogue reading. The remainder of the time is given to grammar, composition, spelling, and penmanship. Grammar is confined to essentials: Capitalization, punctuation, the formation of plurals and possessives, practice in the use of pronouns and verbs. Composition, oral and written, deals with matters of personal observation and with experience gained in the occupational work of the school, on class visits to municipal buildings and industrial plants, shopping excursions, etc.; with business correspondence and business forms; with specifications; with accounts of what has been read, etc. Occasionally a story that has been read is dramatized and presented for the benefit of the whole school, or programs showing the work and correlation of the different departments are arranged and presented.

Mathematics.—Fundamental processes, with ample practice in correlation with geography, shopwork, and household economy. Practice in short methods used in business and trades, with stress upon immediate practical application in connection with the occupational work of the school and the class visits to factories, banks, etc. Practice in writing and receipting bills, in best ways of marketing and keeping accounts, in reading meters and testing the accuracy of bills, in the use of deposit slips, bank checks, money orders, etc.; in profit and loss, simple interest, taxes, insurance, trade discount, and commission; in the use of the triangle in determining distance, the law of levers, the relative speed of parts of machines; in the subdivision of lines and angles, the drawing of tangents, construction of plane figures, mensuration in its various relations, the construction of graphs, etc.

Geography.—This study is closely correlated with the other departments; the study of foods with cooking; fibers and textiles with sewing; woods, paints, varnishes, and glass with manual training. Visits are made to factories, shops, mills, and stores engaged in the industry or dealing in the products under discussion. In the study periods, outline maps are shaded, showing regions yielding wheat, corn, cotton, and other products under consideration.

During the first year emphasis is placed upon the local geography of Cleveland—its location, surface features, climate, rocks, rivers, modes of transportation, etc. This leads, through industrial necessities, to the consideration of our country's more important industries.

During the second year, the subjects studied by the girls and boys vary. The girls lay stress upon cotton, wool, flax, silk, cacao, coffee, tea, sugar, spices, salt, rice, barley, rye, wheat, vegetables, nuts, fisheries, etc.; the boys upon tropical woods, paints and varnishes, building stones, brick making, the manufacture of glass, heating methods, lighting methods, important minerals, paper, printing, rubber, etc.

History.—This is taught in close correlation with geography, the two being united by the school under the term "geography-history."

During the first year the chief stress lies upon facts that have developed our country commercially and industrially. This involves: The founding of Cleveland by settlers from Connecticut; the settling of the New World by European nations; a comparison of the characteristics, customs, and industrial life of

these; the growth of English supremacy; the separation of the colonies from England; the comparison of the modes of life in northern and southern colonies; the westward movement of the settlers; famous pioneers and principal routes followed by them; invention of steamboat and locomotive; incorporation of Cleveland as a city; detailed study of city government.

The second year deals with the formation of the United States; its government; a comparison of republican and monarchical forms of government; invention of the cotton gin; Louisiana Purchase; War of 1812, which gave us commercial status with European countries; the Cumberland and National Roads; the Erie Canal; the Spoils System and Civil Service Reform; acquisition of new territory by war and exploration; discovery of gold in California, and opening of region west of the Mississippi River; the Civil War and its results; introduction into the United States of new process of manufacturing steel; the Union Pacific Railroad; period of wonderful new inventions; growth of business corporations and labor organizations; War of 1898 and colonial acquisitions; industrial and commercial prosperity.

Drawing.—These courses are correlated with the work of every other department. The freehand drawing comprises drawings from nature in water-color, pencil, and crayon, with stress upon composition and harmony of color, analysis of plant forms for use in design, and the representation of simple objects in perspective and view drawing.

Design, for boys, is applied to book covers, portfolios, boxes, posters, stained-glass windows, woodworking problems, interior decoration, furniture, lettering, and illumination of texts. Girls apply it in household decoration, table linen, wall paper, rugs, draperies, simple embroidery for articles of clothing, stenciling and wood-block printing for cushions, needle cases, curtains, etc.

Mechanical drawing involves simple working drawings of objects previously made in the shop, showing the necessity for the arrangement of views, conventions of lines, dimensions, etc.; finished working drawings to scale from dimensioned sketches of designs for articles to be made afterwards in the shop; tracing and blue printing; charts illustrating machinery and processes of manufacture in connection with geography; illustrations of geometrical figures and devices for arithmetic work.

Shopwork.—This involves, in metal work, simple objects in copper, brass, and other soft metals, particularly fittings in woodwork, such as box corners, hinges, escutcheons, etc.

The course in preliminary woodwork deals with problems affording systematic use of tools and general principles of construction involved in simple projects of use and beauty. The course in advanced woodwork deals with cabinetmaking, wood turning, and pattern making.

The aim in printing is to give a general knowledge of the different kinds of work in the print shop. The boys turn out all of the printed forms for the school, as well as some text and commercial work.

In the second year boys may give the full time assigned to industrial work (about nine 80-minute periods per week) to specialization in mechanical drawing, cabinetmaking, pattern making, or printing.

For training in business methods, pieces of work are turned out in quantities as nearly as possible under factory conditions—cutting boards, jack boards, tool handles, and other equipment for manual-training centers; book racks, stools, bookcases, screens, frames, etc., for school use or for sale; commercial work in printing for school, and school activities. In all such work time cards are kept by the pupils, furnishing data for use in arithmetical work.

Household arts.—These courses deal with cookery in its varied interests, with sanitation, laundering, home nursing, household decoration, household accounts, sewing, darning and patching, and shopping.

Gymnasium.—Two periods per week are assigned to this work. Its aim is to remedy the effects of faulty posture, to give strength and agility to the body, to secure graceful movement, and to develop by the use of games a taste for healthy and clean sport.

EFFECT OF THE WORK UPON PUPILS.

The effect of the work upon the pupils proved to be full of encouragement. Under the stimulus of kindly and consistent discipline, of patient and persistent faith in their ability on the part of carefully selected teachers, and under the influence of work that dealt with intelligible problems and appealed to tangible interests, the children soon found themselves. They discovered that they possessed abilities and capacities heretofore doubted, detected in their academic studies values bearing upon their immediate interests, and turned to these studies with feelings of good will heretofore foreign to them. As they gained in confidence they gained in poise. With increasing self-respect there came to them increasing respect for the school and its work. With growing recognition of the social value of personal efficiency they gained in individual self-assertion, coupled with a deepening sense of responsibility akin to enthusiasm.

Of far-reaching significance is the gain of the pupils in their academic work. Stolid indifference yielded to intelligent interest; discouragement and sullen apathy in the presence of difficulty to determined persistence and the fervor of achievement. General culture assumed new and enhanced value in its bearing upon success in special pursuits. Interested visitors failed to understand that these eager and alert workers and students could ever have borne the stigma of "dullards and incorrigibles." Parents who came to visit the school expressed themselves as much pleased, praised the growing interest of their children in academic as well as economic subjects, and extolled their improved helpfulness and general disposition at home. They seemed to revel in the new sensation of pride in the work and progress of their children.

A concomitant result of this growing appreciation of the value of school was found in the steady increase in regularity of attendance. The significance of this gain is enhanced when it is remembered that a number of the pupils come from distances, involving trolley trips of from 6 to 7 miles each way, and others must walk 3 or 4 miles to and from school every day.

A lingering misapprehension, perfectly natural in view of the origin of the school, that membership in its classes implied dullness or worse, was overcome so completely before the close of the first year that the opening of the second year brought a number of volun-

tary and persistent applications from "bright" children. Moreover, a number of the pupils of the first-year course had gained so much interest in school education that on returning to school for the second-year course they expressed eagerness to prepare for entrance in the Technical High School.

WHAT SOME OF THE PUPILS HAD TO SAY.

A few weeks after the beginning of the second year of the school the writer of this sketch devoted several days to the inspection of the school. In the course of his investigations he requested a group of 27 girls and a group of 37 boys, all of them members of second-year classes, to state freely in a letter addressed to him, and closed without revision by the teacher, what benefit, if any, they had derived from transfer to this school and what were their favorite subjects of work and study.

The following extracts from the letters of the girls will indicate the spirit of their answers:

I like the school because the teachers teach the studies we most need, especially the boys and girls who want to earn their own living.

I find that I have improved in the subject which seemed to halt my progress in school. This subject is arithmetic, and I am grateful to the teachers and the school for their help.

The school work is told so interestingly that we can use it out of school.

I like the school because it has helped me to get good marks and be good to home folks.

The school has taught me to be useful in the home and to be neater in my work than I used to be.

I hope this school will help me more every day, so that I may be more useful when I grow older.

Here we learn to sew and to cook, and we learn arithmetic and geography that we will use out in life.

Our arithmetic and other studies are given us in a way that will help when we are grown up.

This school has helped me to wish to be helpful to others, and it has taught me to work so that when I am at home I can help my mother.

The teachers here speak to us like grown-up sisters. They tell us what we should do in a way that makes us feel at home.

I enjoy coming here, because the lessons are more businesslike.

Since I came here I have learned more than in the seven years at grade school, especially in arithmetic.

I like this school because I never could have learned anything, and I am more use in the world. I learned to be a lady.

Out in the grade schools I felt as if I just wanted to stop, but here the work is so interesting that I don't like to leave it.

The school has helped me in what I needed most, obedience and behavior.

Cooking and sewing were named as favorite subjects by 21; gymnasium practice and swimming by 8; geography by 6; arithmetic by

10; English by 9; drawing by 5. Six of the girls were looking forward with eager interest to the millinery of the second year.

The letters obtained from the boys yield the following more or less significant hints:

The lessons were so interesting that I felt as if I were taking a new hold in life.

I am more businesslike than I was before and can do my work much better.

The school has taught me what an education means in life.

We do not sit in one room all the time, and we have the privilege of changing classes.

The school has made me be more of a man; it has made me have more self-respect and responsibility.

I like the shopwork because it gives me something to do with my hands.

The six hours in this school pass quicker than the five hours in the other school.

It makes me more respectful, and the work is more of the kind I like.

If the industrial school continues to be used to make men of boys, it will soon be of great value.

In making things at home I have more confidence in myself.

It has learned me to have better manners and to do better arithmetic and lots of other things.

I learned to be more obedient, and my parents say: "Ycu seem to be learning more than you used to learn."

The school has made a man of me.

The school has helped me to think and to get my work more easily.

I like it because it is in the line of work I will follow. [Several boys express this thought. Others see in the work good preparation for the Technical High School, and one of these for subsequent attendance upon a course in scientific farming at the Ohio State University.]

It has not only helped me in learning a trade, but to get along better in my other studies.

It has taught me to like school. I like all the work we have.

Among the favorite subjects mechanical drawing is mentioned by 26, woodwork by 18 of the boys. Seven boys praise the fact that they do not have to sit in one room all day. One boy criticizes "the poor location" of the school, but is otherwise much pleased.

Clearly there had been distinct awakening in the life of these children under the stimulus of the new work. There are evidences of gain in sustained interest and purposeful effort extending even to so-called academic work. Stress is laid by the children on their gain in general interest, on the practical value of the school as they see it, on their improvement in obedience and "behavior," in self-respect and renewed confidence in their ability, a conviction that they amount to something. A few attribute this to the industrial and economic features of the work; others to the helpful attitude of the teachers; still others to the departmental organization of the school,

which does away with the feeling of constraint in being confined in one room "the whole day" and gives opportunity for the mental relief that comes from change of environment. Evidently the feeling of dawning manhood and womanhood with its "sweet responsibilities" had come to these children. They had tasted the proud privilege of self-education. Their school was to them no longer a fancied preparation for a life far in the future, but had every characteristic of an actual life as they saw it and had come to evaluate it in relation to their own inclinations and hopes.

Interviews with teachers who had guided the work corroborated the expressions of these children. Their testimony indicated that the change in the attitude of the pupils toward the school, including its academic work, was due in large measure to the prominence given to industrial and economic work. This appealed to the practical tendencies and interests of these pupils, made the school worth while to them, "kept them at school" as one of the teachers expresses it, "and gave us a chance to keep at them." Moreover, the academic work itself was approached at points of contact with industrial and economic problems. This enabled the pupils to appreciate its value and its need in the achievement of their expanding ideals. To this should be added the strong individual interest of the teachers in the children, the continuous and reverent study of each and all in order "to get at them from within," letting them feel under the stimulus of eager justice and manifest kindness that the school liked them, believed in them and in their worth and ability. Without doubt, too, the effectiveness of this individual interest was aided by the fact that the classes were smaller than those in the current graded school.¹

A few quotations from letters recently addressed to the writer by some of these devoted teachers will bring these statements into stronger relief. One of these, who has been with the school since its establishment, writes as follows:

Some of these children seemed to have lost all faith in their own ability. They were brought to the school by parents who expressed the hope that "this last experiment" will prove successful and that the boy or girl "will now get along in school and secure an education." It is most interesting to follow these and to notice the change in them, when they begin to realize that their past record is not known or heeded by the faculty, that here they have a chance to begin anew, that the teachers have a special interest in each pupil, that the boys or girls are encouraged to ask questions, and that the work fits their natural tastes and satisfies present and future needs.

Realizing that they can make good in one or more subjects and that the teachers have faith in them, they rapidly gain self-confidence and become happy

¹ The school is organized on the departmental plan, with special teachers for the several subjects of study and work. Mechanical drawing, woodwork, sewing, cooking, English, geography, history, a half-time teacher for art and another for printing, and special teachers for gymnastics and singing. Except in the last two subjects, the number of pupils in any one class does not exceed 20.

and industrious. In fact this change is so marked in many cases that in eight weeks the expression of their countenances is permanently changed for the better, and their carriage and general appearance are similarly improved. In a few cases in which this change failed to be noted I investigated and found in each instance that the child was depressed by home conditions.

Another teacher points out a difference between the first and second year students:

The second-year students, as a whole, show initiative, executive ability, poise, and a general intelligence far in advance of the first-year pupils. Also, while in the matter of discipline it is frequently necessary to reprimand first-year pupils, this is of rare occurrence with second-year classes. Apparently, the school has succeeded in establishing an abiding interest in work and a feeling of self-respect as well as of respect for the school.

Still another adduces the testimony of parents as to the change of attitude in the life of the boys:

Several parents have come to us and testified that since their boys have come to this school they are more obedient and truthful and more thoughtful of their parents at home. Truancy is less prevalent than in the other elementary schools. A number of boys admitted to me that they used to be truants, but that since they had come to this school they had not missed a day. They showed great pride in these statements. Evidently the pupils are interested in their work and, what is equally noticeable, in each other's work. They help each other. Frequently, when a pupil has done exceedingly well, I hear of it from others. In class these "retarded children" soon lose their timidity. They no longer hesitate to recite and to express opinions for fear of a mistake.

In this connection it is interesting to note that in many instances pupils who withdraw from the school before graduation do so unwillingly, yielding only to the urgent demands of parents who need their aid as wage earners.

It is to be regretted that, as yet, detailed and systematic statistics as to the success of graduates and others in subsequent work are not available. A system of "following up," however, is planned by Prof. Lytton S. Beman, the efficient director of the school, to whose judgment and zeal its successful development is largely due.

In the meanwhile, enough information is at hand to warrant the inference that the school is meeting quite satisfactory the expectations of its friends. The progress of graduates who have entered the technical and commercial high schools is reported to be quite satisfactory. They easily hold their own, and in many instances show themselves superior in intellectual grasp and executive ability and noticeable for their earnestness and poise. Graduates who go to work immediately after graduation usually do so after careful inquiry as to the character of the work, its sanitary conditions, its outlook, etc., under guidance of the teachers. They earn from \$12 to \$20 per week and soon attain the respect and confidence of their employers.

Concerning those who go to work or are forced into it before graduation, accounts are very meager, although on the whole favorable. A notable fact is that the majority of these, as well as of the graduates at work, seek every opportunity to gain additional information and practice in evening schools and other supplementary schools.

There is much complaint from teachers, parents, and pupils about the location of the school. It is stated that the district is one of the worst in the city; that there are a number of immoral houses in the vicinity of the school; that from a sanitary point of view the immediate neighborhood is objectionable; that there is no room for playground or for school gardens, because on one side there are crowded dwellings each harboring many numerous families, on another there are stables and warehouses separated from the school building by narrow alleys, and the remaining two sides face streets.

It is stated, however, that the school authorities are fully aware of these drawbacks and planning to remedy the evil. With this in view, it is proposed to transfer the school to a special building favorably located and fully equipped for its specific purpose and provided with ample space for playgrounds and a school garden. Moreover, the benefits so far derived from the work of this school, in spite of its drawbacks, are said to have stimulated a desire, ripening into purpose, to establish similar centers in other parts of the city.

There is even a proposition to extend the course of work of such schools and to give to the added year or years a distinctly vocational or trade-school character, with stress possibly upon electric work, printing, drafting, cabinetmaking, patternmaking, the building trades, gardening, or other local needs, and all this with increased emphasis upon civic and other cultural interests.

STATISTICAL HISTORY.

The statistical account of the history of the school since its organization in 1909 presents a number of problems that call for explanation. The statistical data are presented below; these, as well as the accompanying available explanations, the writer owes to Lytton S. Beman, the efficient director of the school.

The total enrollment for the first year (1909-10) was 152—108 boys and 46 girls. Of these, 51 withdrew in the course of the year to go to work, 1 on account of sickness, and 1 left the city. Of the remainder, 96 were promoted to advanced classes, and 3 who had entered during the latter half of the year could not be so promoted.

The enrollment for the second year was 177—121 boys and 56 girls. Of these, 27 withdrew in the course of the year to go to work and 6 on account of illness. Of the remainder, 53 were graduated, 68

were promoted to advanced classes, and 20 continued in their classes as above. Of the graduates, 22, or 41.5 per cent, entered advanced schools of secondary rank the following year.

The enrollment for the third year was 186—140 boys and 46 girls. Of these, 40 withdrew during the year to go to work, 1 on account of illness, and 3 left the city. Of the remainder, 37 were graduated, 64 were promoted to advanced classes, and 41 were continued in their classes as above. Of the graduates, 20, or 54 per cent, entered advanced schools.

The enrollment for the fourth year was 186—132 boys and 54 girls. Of these, 27 withdrew during the year to go to work, 16 on account of illness, and 1 was dismissed. Of the remainder, 28 were graduated, 121 are promoted to advanced classes, and 21 are continued in their classes as above. Of the graduates, 21, or 75 per cent, have declared their intention to enter advanced schools.

After the first year, and still more extensively after the second year, the school, yielding to pressure from principals and parents, consented to receive pupils who were retarded in the sixth grade and who had reached the age of 13; in some instances this privilege was extended even to fifth-grade pupils. Moreover, these pupils entered at odd times in the course of the year. This will account in a large measure for the increase in the number of nonpromotions at the close, more especially, of the second and third years. It also had a distinct bearing on the decrease of withdrawals in order to go to work and upon the decrease in the relative number of graduates in the third and fourth years, in spite of increase in enrollment.

At the beginning of the fourth school year (1912-13), a change in the administration of the public schools took place. In consequence of this the distribution of application cards for entrance in the industrial school was overlooked; and this resulted in a sudden reduction in the number of entrances at the beginning of this year. The first semester, indeed, showed an enrollment of only 130 pupils—86 boys and 44 girls. Although during the second semester this loss was retrieved, the interruption resulted in a notable reduction in the number of graduates at the close of the year. Possibly the increase in the number of withdrawals in order to go to work from 27 in the second to 40 in the third school year is partly due to the same cause, since six months had intervened between the outgoing of the old and the incoming of the new administration.

The phenomenal increase in the number of promotions to advanced classes in the fourth year of the school—121 as against 64 in the third year—will find its explanation in the fact that, because of reduction in the number of pupils assigned to the respective classes during

the first semester, the teachers found it possible to emphasize special attention to individual pupils.

It is interesting to note that in spite of disturbing influences, indicated above, the percentage of transfers of graduates to schools of high-school rank increased steadily throughout the three years, rising from 43 per cent of the first class of graduates to 75 per cent of the last class.

CONCLUSION.

The success of the experiment, even in the face of adverse conditions, does not imply criticism of the work of the teachers in the ordinary school with its dominating attention to language, literature, history, and the abstractions of arithmetic. Nor does it imply that these and other so-called cultural subjects of interest should receive less attention. Language and its offspring, history and literature, constitute, indeed, the highest possessions of man; and the control of number relations is indispensable in man's adjustment to the finite universe to which his earthly life is confined. Yet his control of nature and life, as well as the dawn of reason and sentiment and the very birth of language, are primarily connected with the use of his hands and their reinforcement by tools. Even to-day, indeed, humanity as a whole depends for the continuance and increase of this control upon tool-using activities, to which the great majority of human beings must devote their energies. Thus it happens that under the joint influence of heredity and environment the children born to humanity are, primarily if not predominantly, hand-minded, eager for manual experiment and self-expression.

In the family, in the kindergarten, and primary school this is more or less intelligently recognized. Their handwork, however, remains confined largely to the symbolism of play; it rarely touches industrial or other economic value. Later on, and more especially in the grammar grades, this work is abandoned, and the manual training that takes its place is so limited in scope, so wholly divorced from the bulk of the class work, and so incidental that it fails to meet the eminently hand-minded pupils. Hence the perfunctoriness, the slow progress, the lack of ability to retain and to apply on the part of these pupils. Hence, too, irritability and apathy with regard to the progress of these on the part of teachers.

In a large measure the very history of the prevailing type of school accounts for this. The school was born among and for the language-minded. Intellectual and physical culture—not manual self-expression and economic insight—was its aim. The industrial worker was practically excluded from it; he had no leisure for it, no

time to engage in its play. This one-sidedness still clings to the school, and it is hard to eradicate in its appeal to the imagery of words and abstractions, its indifference to the concrete actualities of life.

In reading, all but exclusive stress is upon literature; the story and some descriptive matter usurp attention; interests that call for stimulus and information with reference to everyday needs and occupations, to science and engineering, to industrial and domestic work, to matters of environment, are slighted. The same applies largely to writing and arithmetic, although here the "business man" has secured a share of attention. Concrete geometry and mensuration, so valuable in industrial, domestic, technical, and agricultural life, are but transient incidents. The same neglect applies to matters of natural science; nature study and physiology appear, indeed, on some programs, but in time and importance assigned to them they yield to grammar and spelling, although in life the latter contribute much less to its prolongation and enjoyment than the former, which are, indeed, acquired by the majority quite incidentally. Geography and history, as a rule, deal quite insistently with everything but the immediate practical needs of life. There may be some drawing, but it is apt to be forced from the start into "high" art; it keeps away from the needs of the worker and rarely serves as a means for self-expression. Sporadically, we find manual training in some of the grammar grades, but the time assigned to it is inadequate and frequently the method of work is so painfully abstract and so far removed from the pupil's interests and needs that it sometimes becomes as hateful as grammar. At every point, indeed, the curriculum tends in matter and method to academic ends—the very term indicates their origin—rather than to the ends of practical life.

We need for professional ends and for the purposes of general culture much, if not all, of what the school of the usual sort holds high in its tradition. But, in addition to these things or, perchance, in the place of certain phases of them and in different form and distribution, we need, at least for the hand-minded contingent which is destined or preparing to deal with the industrial and commercial interests of humanity and with the progressive conquest and control of nature's forces—for these we need opportunity and guidance in the development of constructive, inventive, and creative skill and genius in the fields of activity, in which alone the best of each of them can become available.

The Cleveland Elementary Industrial School may not offer the best general solution, certainly not the only solution, of the problem involved in these considerations; but it does offer a solution that lies in a right direction and one which under certain conditions

affords great promise of success as an initiatory, if not as a permanent, measure. Beyond doubt, it proves clearly that with some types of mind retardation in the school as currently organized indicates neither fundamental dullness nor essential incorrigibility, but that these alleged defects represent reactions forced upon the children by faulty and inadequate modes of treatment, and that these traits readily yield and make room for the joyous unfolding of heretofore suppressed points of excellence in character and bearing.



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SCHOOL-YARD GAMES. BRONX BOROUGH, NEW YORK CITY.

THE REORGANIZED SCHOOL PLAYGROUND

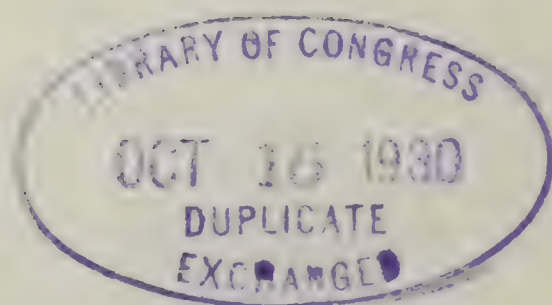
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HENRY S. CURTIS

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THE REORGANIZED SCHOOL PLAYGROUND.

“ Fifty dollars fine for anyone found trespassing on this yard after school hours.” The foregoing sign was on the side of a school building in a middle-sized city of southern Arkansas, but the sign is not unique in that locality, and it represents an attitude of mind that has been very nearly universal. The school yard has been one of the least utilized of our educational resources. Surfaced with a view to his convenience and used mostly in accordance with his desires, it has practically belonged to the janitor. I do not know that there are any cases where he has used it to raise potatoes and the family vegetables, but he might nearly as well have done so for any advantage that has come to the school or the children. Often the pupils have not been allowed to come to school until 15 or 20 minutes before 9 and have been required to leave the yard immediately after dismissal. The gates, if there were any, have been closed and locked during the summer time. Under the circumstances there is little wonder that school yards have been generally inadequate in size and often atrocious in condition.

In the past 10 years the play movement has burst upon us and has brought with it an illumination as to the educational value of play. The old-time school yard, with its limited space and its restrictive traditions, is entirely unsuited to the new uses demanded by the new ideals, and there is going on everywhere a reconstruction of theory and practice to meet the new requirements. As in all reconstruction periods, however, the facilities and needs are out of harmony, though many cities, with an imperfect understanding of the problems involved, are attempting to improve conditions according to their lights.

The new activities for the school require, in the first place, a larger yard; secondly, a yard which is in condition to be used—which is not often the case at present; and, thirdly, a yard with a certain amount of equipment for play and some one in charge. The yard is nearly as important as the classroom in the conduct of the modern school, for it must furnish a place for gardening, for open-air classes, for organized play and physical training both during the school day and after school, on Saturdays, and during the summer vacation. These new uses are creating a new condition, which warrants far greater expenditure and care than the old-time yard ever received.

It is unfortunate that any school needs to be built in the city, because it is usually impossible to get enough land for baseball, football, and the other games that the children should play. The past 10 years, however, have seen the invention or introduction of several new games, such as volley ball, basket ball, indoor baseball, and tether ball, which are more economical of space than any games that we have formerly had and which help to relieve the almost impossible condition of a few years ago. It is possible now on a block of ground, if the block is of fair size and the school is not too large, to have a good deal of play that is worth while.

SIZE OF THE SCHOOL YARD.

Our schools have had very inadequate yards in the past, and many of the largest city schools are so hemmed in by surrounding buildings that the yards can be enlarged only by buying highly expensive property. Nevertheless, there is a very strong sentiment all over the country for larger grounds, and yards are being enlarged in many cities wherever there is an opportunity to purchase adjoining pieces of land at prices that are not prohibitive. Cities are often paying as much as \$10,000 or more per acre for such land. The movement is noticeable also in the country, but much less so. Country communities are very conservative. Grounds can usually be purchased for country schools at the rate of \$100 per acre or less, but it is doubtful if 1 per cent of them have playgrounds that are as much as an acre in extent.

It is impossible to set any arbitrary standard for the size of a school ground in the country. It certainly should be large enough for baseball, as it ought not to be necessary to do most of the school play in the neighbors' fields, as is so often the case at present. Very often a neighborhood park and picnic ground should be made at the school also. This should always be done, I am inclined to believe, if the site offers the facilities, and there is no better place in the neighborhood. The minimum size for the ground of a country school should be 2 acres. Nothing less than this will do for baseball, and if the tract is to be used by the older people evenings and Saturdays, as it ought to be, nothing less than 3 acres will be adequate. Ten acres will not be too much for the general athletic field and picnic place for the district. There is no advantage in the large yard, however, unless the yard is kept mowed, so that it can be used. City children need a good-sized school yard because there is no other place to play. Country children need a large yard because at home there is no one to play with, except in the simplest games for little children. The State boards of education in Pennsylvania and Virginia are dealing wisely with this problem by requiring the plans of all build-

ings and grounds to be submitted to the State board for approval and not approving any plans for new schools that do not provide for adequate playgrounds.

A city high school requires at least 10 acres of ground in order to carry on the games that its students should play, because nearly all of these games require a considerable area, and the growing conception is that every student, not a few athletic specialists, should take part. Girls need a separate field from boys and they should have every encouragement in their play. High schools are probably getting two or three times as much ground as they did 10 years ago, but it is practically impossible in most cases to buy 10 acres of ground in the central portion of a well-built-up city for a high-school playground. This problem can be dealt with only in three ways: First, by replacing the space-requiring games such as baseball and football by space-economizing games, such as indoor baseball, volley ball, and basket ball; second, by using the school grounds at different times for different classes all through the school day; or third, by purchasing a good-sized field at some distance from the school. The last is such a poor alternative that it seems scarcely worth considering.

Various standards have been proposed for the city elementary school. The board of education of England requires 30 square feet of playground for each child. This would place a child every 5 feet over the school yard. A year ago the State of Washington passed a bill requiring 100 square feet, but this was vetoed by the governor. Even this would have been inadequate. In a good many of the old schools of New York there is not room enough in the external playground for half of the children to stand in the closest possible order. Where the land on which a school building is erected costs two or three hundred thousand dollars it is not to be expected that much more ground will be secured than the bare needs of light and fire protection demand. But for most of the new schools, in the smaller cities at least, there is at present a workable standard, namely, one block for each school. This is quite generally adopted in the Middle West and the South at present. In the city of Little Rock, Ark., there is not a school for white children in the city that has not a full block to itself. There are not more than one or two schools that have not a full block in Pueblo, Colo. There are 16 school grounds of more than 1 acre in Dallas, Tex., and the last five grounds secured in Houston contain from 3 to 8 acres each. In San Angelo, Tex., every school but one has two blocks at least, and two have about 10 acres of play space. The first school built in Gary, Ind., had 2 acres of playground, the second had 4, the third 11, and a lot recently purchased contains 20 acres.

I think we may well put it down as a minimum requirement in most cities that each school should have one block of ground. It is

believed that new schools will generally adopt such a standard, and sooner or later the yards of many of the older schools will be enlarged to conform to it. Two years ago the city of Houston, Tex., secured a bond issue of \$500,000 for enlarging the yards of several of its old schools. The city of Galveston has just voted a bond issue of \$100,000 for the same purpose. There are many other cities that should do this at once, and an increasing number of cities may be expected to do so.

The blocks of many cities are 2 acres or less in size, while those in other cities, as in Salt Lake City for instance, may be as much as 10 acres in size. It can be said in general that a block of 2 acres or less puts all play at a disadvantage. The lots are so short that the back yards are very small, and there is no space for the small children to play. Such blocks are scarcely large enough for baseball when they are vacant, and they are not large enough for school playgrounds even when the school has an entire block. Schools vary from the 4-room school to the 30 or 40 room city school. For play purposes the advantage is with the larger school in the matter of supervision, because it is too expensive to furnish supervision to the play at the school with a small number of pupils; but if the school is large and the block is small, there will be an obvious lack of agreement between them. Probably a 10 or 12 room school is about as large as can well be accommodated on the average city block.

It is often difficult, and sometimes impossible, under existing conditions to secure a full block of ground for a school. There are few entire blocks within the city without buildings, but sites should be selected ahead as far as possible, anticipating the city's growth, and no new addition should be allowed to come into the city without setting aside a block for a school. Owners generally ask more than the land is worth for school sites, and it is often difficult for the school board to get enough money to purchase a block. They usually hold that they have no right to condemn land for a playground, and often it can be secured in no other way. In most cases all that school boards really need is a modern interpretation of the school laws. They are usually given the right "to condemn land for school purposes," and the organization of play has become nearly as much a "school purpose" as arithmetic. In some cases it may be necessary to have the school laws changed, but usually that will not be difficult in the light of present interest in play. It surely is possible in most places to get land enough to carry on the activities of a modern school.

In hilly cities school sites are often selected that are very uneven. Such sites are usually cheaper in the beginning, but are nearly always dearer in the end than sites that are nearly level. A rounded hill offers a conspicuous position for a school building. Yet it is much less suitable for the location of a school than a store. No merchant



A. AN EVENING RECREATION CENTER, NEW YORK CITY.



B. SWINGS PROPERLY ARRANGED, WORCESTER, MASS.

would select such a site, because he knows that his customers will not climb the hill to buy of him. It is just as great an effort to climb a hill to go to school as it is to buy a stick of candy. After you once reach the store it is just as well on the top of the hill as anywhere else. But the hilltop is useless as a school playground when you once get there, as there are very few games that can be played on a hillside. A hillside is much more appropriate for a private house than a school. The house does not require very much space, and not much terracing is required to make the yard nearly level. But for a school the whole block has to be put into one or two terraces, as nearly level as may be. The grading required will probably cost as much as the site, or more. A terrace always tends to gully out and is a source of constant expense. The terraces should be sodded or walled at once or covered with honeysuckle or some such vine. The honeysuckle will add greatly to the beauty of the bank, and it will hold it like a stone wall. The New York, New Haven & Hartford Railroad is covering its cuts through Rhode Island and Connecticut with rambler roses, and it may be that these would be serviceable for school terraces in some localities. If it be found that the school occupies a site that can not be leveled without a prohibitive expense, the site should be given up.

LOCATION OF THE SCHOOL BUILDING.

When an appropriate piece of land has been secured and leveled off, the next step should be the location of the building upon it. When a city hall or a courthouse is to be built, it has become the custom to place it in the center of a large block, which is treated as a sort of park, after the fashion of the English country residence. This park gives the needed space, so that one can get a view of the building and observe its architectural features. Where the space around the building is used as a park, there is no lost space and no conflict in the two uses. The central location is justified by the fact that this is a city building that all are to see, and its architecture is an asset to the city. When we consider the location of the school building, however, the decisive question should be the purpose to be served. If the school is erected to please the passer-by and to be an ornament to the city, then the architect should be allowed to place it with a view to securing architectural effects, and he will place it in the center of the plot in most cases. The building should be surrounded with grass, and the children should not be allowed to play upon it. If, on the other hand, the school is intended for the education and welfare of the children, the building should not be located in the center of their playground. The architecture of the building has little, if any, effect upon them, while play is the most fundamental thing in child nature. If the building is placed in the center of the ground and the children are allowed to play on all sides of it, the

grass is soon killed off, the surroundings become bare and unattractive, and the location is the worst possible. It may be said, too, of most of the buildings so located that they have few architectural features to exhibit, and a vista only serves to set off their ugliness. But even if all the ground is used, and the grass is not respected, it is impossible in most cases to have play that is vigorous and worthwhile when the school building is placed in the center of the site, because this usually leaves only a fringe of ground that is not large enough in any place for play. Instead of having the windows on one side to protect from balls and missiles, the windows on all sides have to be protected. If the school ground is to be used, it is better for the architectural effect as well as for purposes of play to locate the building at one end of the block, within 15 or 20 feet of the sidewalk. This space in front of the building can be parked, laid out to flower beds or ornamental shrubbery, protected with a low hedge or a fence covered with vines, and kept intact for architectural effect.¹

VINES.

Unless the climate is rainy and cold, it will be an advantage to plant vines over the school building. Vines make the building cooler in the warm parts of the year, and the touch of green that they add is generally welcome. Wisteria will make it a great flower garden in spring. The ivies will furnish a glow of grateful color in the fall. Where a strip of land 3 or 4 feet wide about the building is prepared for vines and flowers, it often adds very greatly to the appearance of the school and to its comfort during the warmer months.

THE SURFACING OF SCHOOL GROUNDS.

The school yards of many of our cities are a disgrace to the systems to which they belong. I believe that much less than 50 per cent of the yards of the country are in condition to use. Covered with brickbats and piles of ashes, gullied out by the rains, with the roots of trees projecting in places, they furnish an almost impossible surface over which to run. Not more than one-quarter as large as they should be in most cases, the space should be utilized to the fullest extent. But in actual fact not more than 25 per cent of play efficiency can be secured from the yards of many a school system. There is many a school site that has cost \$10,000 or more that has received less than \$100 afterwards to make it available for the play of the children. The school trustees finish the school building and apparently for-

¹ NOTE.—The author overlooks one of the strongest reasons for locating a school building in the center of its lot, namely, the desirability of removing classrooms as far as possible from the noises and distractions of the street. Practically, all such questions must be determined by balancing the advantages against the disadvantages. The advantages of the location favored by the author are well set forth; the weight of the disadvantages in any particular case will necessarily determine the result.—Editor.

get all about the playground, leaving the dirt taken from the cellar unlevelled and the ground full of holes and hummocks. It seems almost incredible that this should be so frequently true as observation shows it to be. Yet even if it does cost \$1,000 to grade and surface a \$10,000 yard, it surely is not wisdom to throw away the \$10,000 for the lack of the one. In many cases all that is needed is to dismiss the school early one afternoon and set the children with rakes and hoes to filling in gullies, raking up cinders and bricks, digging up projecting stones, and cutting off roots. Probably half the school yards of the country could be improved 50 per cent by this simple expedient.

As in the other features, it is easy to see that the interests of play have been disregarded also in surfacing school yards. In the play of men three surfaces have been approved—grass for baseball, football, and games requiring a large space; a sandy loam or sand-covered clay for tennis courts; and cinders for running tracks. Where the school playground has been surfaced at all, it has generally been with brick, cement, gravel, or broken stone. The requirements of the case are a surface that is smooth; that does not get muddy after rains or dusty in dry weather; that is springy beneath the feet and soft to fall upon; that does not get overhot in summer or slippery in winter; that does not wear out the play apparatus and the clothes of the children unduly; and, more than all, that does not wear out their nervous systems from its shocks and bruises. It is not easy to find a surface which meets all these requirements. Probably we shall have to manufacture a surface for the playground as we do for the street before we shall get one that is entirely satisfactory.

Grass.—Wherever a school can have grass on the yard and have play at the same time, grass is a good surface for most games, but this is usually possible only in country schools, where there is a large yard and a small number of children. In the South I have seen Bermuda grass that had a good start stand the intensive play of a city school. Perhaps its wider use will be a solution of the problem for the smaller cities of the South, but in most cases play and grass are antagonistic, and the school must choose between them. A school that chooses grass for decorative purposes instead of play might with equal wisdom choose a wall pattern in place of a blackboard for its classrooms.

Brick.—Not a few of the school yards in our great cities are surfaced with brick. I imagine that this surfacing must have been chosen by the janitor. It is an admirable yard for his purposes. It does not get muddy after rains or “track” into the school building. It is so hard to run over that the children prefer the street, thus causing the janitor the least possible amount of annoyance. At its best,

brick is hard and unyielding, with shocks upon the nervous system at every step or jump. To fall upon it means a bad bruise on the knee and often a hole through the trousers. Most of the bricked yards that I have known have been more or less uneven, or contained soft bricks, where the water would stand after rains. In frosty weather the brick holds the frost, which makes it a very difficult surface to run or walk over. If the members of any school board now providing brick for school yards would go out and play one game of indoor baseball upon it, they would take it out the next day if possible. No company of men ever has or ever would consent to play on a brick playground. Brick is better adapted to tennis than it is to most of the games that the children play, but I have not heard of any bricked tennis courts furnished by the tennis clubs.

Cement.—Cement is better than brick. It is not so slippery or uneven, and it is easier to run over. In very large schools with very small yards, like those of New York City, cement or asphalt may be the only really practical surface now available, but nearly the same objections apply to cement as to brick.

Gravel and broken stone.—Both of these surfaces, especially the former, have been much used in surfacing school yards and are generally unsuitable, not so much from the necessity of the case as from the materials selected. Anyone who has attempted to run over a heap of macadam or a surface covered with loose pebbles knows how difficult it is. The loose stones turn the ankle and cause constant slight sprains that weary the runner. To fall upon these sharpened pebbles means a serious bruise. For the children all these conditions are ten times worse, because so many of them go barefoot in the spring and summer, and pebbles mean constant bruises on the feet and toes. A yard of this kind will wear out a pair of shoes in a few weeks; baseballs and volley balls will get ragged with a day's wear. The yard probably destroys enough clothing and apparatus every year to pay for surfacing it properly. There should be no gravel or broken stone on a school yard larger than a small pea or, better, a No. 4 shot. The small, round gravel that is used in the Chicago playgrounds, known as torpedo gravel, makes a fairly satisfactory surface for play. The dust macadam, such as is used for the finest top dressing of drives and tennis courts, also makes a satisfactory surface. The torpedo gravel costs about \$1.50 per cubic yard. One yard will cover about 100 square yards of surface. It may be obtained of building contractors. The broken stone will be found to be hard to run over, to wear out clothes and play apparatus rapidly, and to be generally unsuitable for play, but the objection that school boards are apt to make to it is that for some reason it tracks into the schoolhouse. If this macadam is covered with 1 or 2 inches of loam

or sand, it furnishes excellent underdrainage, and the result is a very good play surface.

Cinders.—Coarse cinders, such as are often used on school grounds, will use up a baseball in an afternoon. They also cut the shoes and the clothing if a person falls. Cinders that are well ground and rolled and leveled make a satisfactory surface to run over, but not a very comfortable surface to fall upon. They have been used in the past almost altogether in making running tracks. Many of the London board schools and very many of our own city schools are surfaced with cinders. At the best, cinders are hot in summer and unattractive in appearance, though fine cinders make a fairly good surface.

SATISFACTORY SURFACING.

Thus far our consideration of surfacing has been mainly a matter of elimination. Some surfaces are more unsatisfactory than others, but there is no surface that is wholly satisfactory. Doubtless we shall have to manufacture the surface for our playgrounds in time, much as we do the asphalt for our streets. However, there are now better surfaces than are generally used. Mr. Leland recommends a mixture of clay loam and cinders as satisfactory. On the whole a sandy loam that is well underdrained makes a very satisfactory surface. Almost any sort of a tennis-court surface, but especially sand covered clay or macadam, is a good play surface for a yard with moderate use.

KEEPING SCHOOL YARDS IN CONDITION.

In the past the school yard has been expected to keep itself in condition. It has been no one's duty to look after it. It may be taken for granted that it will not do this. There are not many enterprises that can be launched and left to run themselves. Every school yard with anything but a grass or brick or cement surface ought to be leveled and rolled down at least once a year. Often this can be done by the children themselves. Most grounds need much more care than this, but an overhauling once a year is an absolutely minimum requirement. Generally the school yard needs to be sprinkled at certain times to keep down the dust. In California it is not unusual to sprinkle with a heavy asphaltum oil and then spread sand on top as in putting Tarvia on a road. In Philadelphia glutrin is used on the school playgrounds. This is a by-product of paper making and is said to be "all of the spruce tree but the fiber," and greatly to improve the surface for play purposes.

Mr. W. D. Champlin says of the use of glutrin in Philadelphia:

Glutrin is a thick, adhesive liquor, and in color generally appears not unlike molasses. It is very soluble in water and therefore by proper dilution or by the after effect of rain on treated surfaces can be caused to penetrate very

thoroughly and evenly into the ground over which it has been sprinkled. On drying it acts like a powerful adhesive. * * * It will not harm anything that would not be spoiled by plain water.

The cost per gallon? In quantities of less than a carload the material is sold at 15 cents per gallon of 10½ pounds. In carload lots the price is 14 cents. The cost of spreading is approximately 1 cent per square yard.

As a rule, the amount of glutrin required for the first treatment of a playground will vary from 0.5 to 0.6 of a gallon per square yard, and the mixture, as a rule, should be 2 parts of water to 1 part of glutrin. On succeeding treatments the amount of glutrin required will, as a rule, be from 0.2 to 0.3 of a gallon per square yard, and about 3 parts of water to 1 part of glutrin should be used.

For underdrainage the entire plot should be graded to a subgrade of 10 inches. This surface so made is to be carefully, though not accurately, leveled, and is then to be compacted by rolling with a steam roller of not less than 5 tons in weight. All soil or waste material resulting from this grading should be taken away and disposed of. Then spread over this surface sufficient hard-coal cinders so that after rolling with a steam roller of not less than 5 tons in weight there will be a thickness of 5 inches. The cinders must be thoroughly wet before and during rolling. The rolling may be done in one layer. Then place on top of the cinders a sufficient depth of stone screenings so that after wet rolling with a steam roller of not less than 5 tons in weight and bringing the surface to the grades given by the district surveyor, there will be a thickness of not less than 5 inches of stone screenings.

After this surface has been sufficiently and properly rolled the entire surface must be sprinkled with a mixture of glutrin and water until one-half gallon of glutrin has been absorbed by each square yard of the surface, the proportion of mixture to be 2 parts water to 1 part glutrin.

FENCING.

There is no uniform practice in regard to fencing school yards. In the eastern sections of this country they are generally fenced; in the middle and southern sections they generally are not. There has been a tendency during the past few years to remove fences. The fences around parks and public buildings have generally been taken down. Houses and house lots are usually unfenced. This is one expression of the socialistic tendency of our times. We are moving away from the cloister and its exclusiveness. Undoubtedly the removal of fences from most of the large public parks has been an advantage. There never was any reason for fencing them. The same may be said of the fences in front of houses. The strip of parking and grass is often more attractive than the strip broken by fences, as was formerly the case. It is hard to see that the fence ever served any purpose except exclusiveness, and the question in this regard is naturally one of individual preference. However, the tendency everywhere is toward fencing playgrounds and fencing parks used as playgrounds. Sherman Park, Chicago, which is both a park and a playground and contains 60 acres, is fenced, while Washington and Jackson Parks are not. The fence used is a high

steel picket fence, costing about \$1.50 per running foot, and it is there in order that the park may be closed at a certain time at night, and the public kept out after that hour.

There are certain advantages in having the school yard unfenced; the play space is considerably increased, as the ground is used to the sidewalk, and frequently the sidewalk and neighboring street itself become a part of the school playground at recess and noon intermissions. Some school yards even in small cities are so small that there is literally not room for the children upon them. If they were fenced, there not only could be no play on the school premises, but often the children could not be crowded inside. The fence not only limits the size of the school ground to a space several feet inside the sidewalk, but the fence space and the land next to it is also unavailable for play. When a game of ball is going on and the ball is batted outside, it requires a long detour and interferes with the rapidity of the game.

These disadvantages of the fence seem serious, and they are serious for some schools with inadequate yards, but the disadvantages of the unfenced yard are also serious. If the school ground is not fenced, the children use the sidewalk and the street for their playground, but the sidewalk and streets were not intended for this purpose. The school, having failed to make provision for the children on its own premises, is plainly trespassing on the rights of the community. No school board has a right to build a school without providing on the school premises a place for the children. If the grounds that have been secured are not sufficient, they should either be enlarged or abandoned. Street play is becoming increasingly dangerous to children, because of the rapidly increasing number of automobiles. Children who are playing in groups are always heedless, and the child who dashes from the school yard in a game of tag is more likely to run into danger than the child who is really playing in the street. There are occasional mad dogs and runaway horses in the cities. If the children are in a fenced yard they are safe, while there is always danger otherwise. However, the urgent reasons for fencing the modern school yard are much more fundamental. It is becoming the custom to put into school yards a considerable apparatus, and to keep them open as directed playgrounds during the summer. It is difficult to protect the apparatus if the playground is not fenced, and it is still more difficult to protect the neighborhood from annoyance. There is frequent complaint in reference to the use of the school yard as a playground, but the complaint nearly always comes from the use of it by rowdies at night after the play director has gone, for then they are apt to come in and greatly annoy the surrounding residents by their yells and boisterous laughter. If a school ground is fenced, the children can also be prevented from running by dan-

gerous pieces of apparatus where they are likely to be struck. Discipline becomes much easier. The fence also makes of the school yard an institution and helps to create loyalties.

There is also an æsthetic incompleteness about an unfenced yard. It does not seem to have the individuality that it should have. Nature puts the bark about the tree and the skin about the animal to separate it from other things, to mark the boundaries of its individuality. The mind seems to demand that things that are distinct in fact should be distinguished in some way from other things.

In many school yards there is a fence dividing the girls from the boys. It is the practice in municipal playgrounds to have separate playgrounds for boys and girls. The reasons for it are obvious and sufficient; there are often loose girls and always loose boys coming to the playgrounds, and it is better not to have them together, or where they can corrupt other children. The same is true of the school playgrounds. If the school yards are to be unsupervised loafing places, as they have so often been in the past, it is certainly better that the girls and boys should loaf separately; but if the school yard is to be a playground and under supervision, it is probably better not to have a division fence in most cases, because the ground is generally not large enough to be divided and because in case of division there must be two play directors, an expense not always justified by the attendance. It is socially dangerous for older boys and girls to loaf together, but they can usually play together with safety.

School fences thus far have not been very satisfactory, as a rule. Undoubtedly in most cities the school yard has been the most neglected and unsightly place in the whole city. If it has been unfenced, it has generally revealed to the passer-by a stretch of untidy bare ground. If fenced, it has usually been with rough boards, painted on the outside and unpainted on the inside. The steel picket fence is more satisfactory. It is permanent, difficult to climb over, and reasonably good looking. It is, however, very expensive and less beautiful than hedge or wire. I am inclined to think that, except in the extreme northern part of this country, a hedge of evergreen privet is one of the best fences. It is cheap, beautiful, difficult to climb, and gives privacy to play, and shuts off the ugliness of the bare ground within. It is a protection from storms in winter, and its grateful green is always restful. It will have to be planted in good soil and protected by a wire fence in the beginning. The prettiest fence, and also one of the cheapest, that can be put around a school ground is a woven-wire fence covered with flowering vines. The wire should be close enough, at the bottom at least, so that indoor baseballs will not go through. If rambler roses or clematis or honeysuckle be planted over this, it will be a flower garden set on edge during a considerable part of the year, and



A. RING GAMES.



B. A GAME OF VOLLEY BALL.



A. THE GIANT STRIDE.



B. OUTDOOR PLAY.

often the prettiest thing in the whole neighborhood. The fence at the Jamestown Exposition was 8 feet high and completely covered with honeysuckle and clematis. The fragrance could be perceived for several rods, and it was admired by all. It grew within a year or two.

TREES.

If a school ground is to be much used in the late spring and summer, in most parts of this country it must have shade. In some parts this is true for nearly the entire year. Trees also add greatly to the attractiveness, if they are well selected and properly placed; but it is also possible to destroy a school playground by planting in it half a dozen trees in the wrong places. If the first tree is planted on the home plate, the second tree in the pitcher's box, and the third tree on first base, and so on around, it will not take very many trees to spoil the available space in most school yards. A large part of the trees that have been planted thus far should be cut out. I have known a small yard to be ruined by planting three trees. In most grounds all trees within the play space should be eliminated. The playground needs shade, but it also needs space. The trees should be planted around the playground at the edge and not within the ground itself. In larger grounds there may also be trees around special features, such as the baseball diamond or the basket-ball or volley-ball court, or along the walks, or along the running track at the side of the ground, but trees should never be planted at random, without a definite plan for the yard and a definite purpose for the trees.

One row of trees should be set around the school ground just outside the sidewalk, and a second row just inside or just outside the fence, according to the size of the ground and the width of the space between the sidewalk and the fence. The rule of tree experts is that shade trees should be planted from 25 to 40 feet apart. It is a good rule to plant alternately cottonwoods and hard maples, or hard and soft maples. Then the soft maples will grow up rapidly and begin to furnish shade very soon, while the hard maples will come on more slowly. As soon as the hard maples develop enough to give sufficient shade, the cottonwoods or soft maples should be cut out and all the space given to the slower-growing but more beautiful trees. If this method is followed, the trees should be planted from 15 to 20 feet apart, so that they will be 30 or 40 feet apart when the soft trees are cut out. It might be well also to plant a different kind of tree in the inside row from those in the outside row. *Paulonia japonica*, common in New York City, looks like a catalpa with the blossoms of wisteria upon it, and is very attractive. The catalpa

itself is a beautiful tree, both in the spring, when it is in blossom, and in the fall, when it carries its long drooping pods. Some of the streets of Washington that are bordered with horse chestnuts are very beautiful in the spring, when the trees are in blossom. Even our common basswood or linden is fragrant and attractive in April and May. In the South the magnolia can be used effectively, and in California the beautiful pepper trees are very decorative. Any of these trees will make of the school yard a great bouquet in the spring-time worth coming a long way to see. It might be well at times to select nut trees instead of flowering trees. The hickory turns a rich yellow in the fall; and hickory, walnut, and butternut furnish good shade. Such trees offer an opportunity for nutting festivals in the fall, though it might be that the temptations the nuts would offer to climbing might not be good for the trees. In Porto Rico they say that they can not have mango trees in the school yards, because the children break them down in climbing for the fruit. The Japanese ginkgo, a tree much used in the streets of Washington, is a beautiful tree, but it is little known outside of Washington.

Very many trees that are planted in school yards die. The most common cause is probably that the trees are not really planted. A tree is often dug or torn up from somewhere, a hole is cut in the school yard, the tree is stuck in, earth is thrown on the roots, and the tree is considered to be ready to grow. It is needless to say that such methods are without result. Trees should be planted late in the fall or early in the spring. If a good many of the roots have been broken, a proportional part of the top should be cut off, for there will not be enough roots to feed a large amount of foliage. A tree can not be planted in the sterile subsoil of a school yard with reasonable expectation that it will live. A space from 4 to 8 feet square and 2 or more feet deep should be excavated and filled in with good, rich earth. The whole should be well packed and watered down, and the tree should be boxed. The estimated cost of planting trees in Washington was \$4 a tree. This price was for the planting and boxing alone, as the trees were furnished by the city nursery. This may seem expensive, but it is scarcely 1 per cent of what a well-placed tree is worth to a school yard.

It is a good thing to have benches around a number of the trees, in order that the children may sit in the shade when they are tired or when they are eating their luncheon. Wherever it is possible the games and play should be so planned inside the yard as to keep a grass border 8 or 10 feet wide under the trees and along the fence. This adds greatly to the attractiveness of the yard and serves as a pleasant place to sit or lie in the shade when tired.

THE NEWER USES OF THE SCHOOL YARD.

Since the school yards of the country are very inadequate, the problem is to get a maximum of use out of a minimum of space, so as to make the small yard meet the needs of the children. One of the rules of efficiency experts is to use the plant as much as possible. There is very little available play space in most of our cities, either for children or for adults. If the school yard is to have its maximum use and efficiency, it should be used from 8 o'clock in the morning until 10 o'clock in the evening all through the pleasant weather, a possible efficiency of about 14 hours a day. As opposed to this, in many school systems the children are not allowed to come to school until just before 9; they are sent home at noon and as soon as school is dismissed for the day, making a minimum efficiency of half an hour to one hour's use each school day, with no use at all on Saturdays or during the vacations. The only school system that I know that is approaching the maximum use is the one at Gary, Ind. In Gary there is a play teacher in the yard or the gymnasium from 8 o'clock until 5 every day and from 7 till 9.30 each evening, thus giving a daily use of the playground for $10\frac{1}{2}$ hours each day for six days a week and all through the year. It is probable that the next 10 years will see the use of all suitable schoolyards quadrupled by use after school, on Saturdays, and through the summer vacation, and by the introduction of play into the curriculum.

PLAY IN THE CURRICULUM.

If small school yards are to meet the needs of play of large numbers of children, the classes must use the yards at different times. Supt. Wirt has worked out at Gary an admirable system to meet this condition. There are no recesses in Gary, but of the first five grades each has two play periods of 45 minutes in the yard every day. This is under the direction of a regular physical instructor, and it is devoted to organized games. Gary has a 6-hour school day, from 8.45 to 12 and from 1.15 to 4. Of this, $1\frac{1}{2}$ hours are spent in the playground or gymnasium during the first five or six years. After that there is one period of physical training a day until the eleventh grade is reached, but in the remainder of the course there is no physical training or organized play except after school and in the evenings. We have undoubtedly been inverting the natural place of physical training, for in most cases it first makes its appearance in the high school, and for many students it first becomes compulsory after entering college. Yet the first period is the physical period of life. This is the time of the greatest motor restlessness, of the greatest interest in physical achievements. The paramount question for the small child is not arithmetic, but physical health. It is impossible for him to attend

long at a time to any mental task. His exertions need to be broken by frequent periods of play and relaxation. His working hours should naturally be much shorter than those of more mature students. If he is ever to develop into the perfect physical type, he must get most of the training during the time of growth, when his muscles and his whole body are plastic. Intellectual training may well go on to the sixtieth or seventieth year, and spiritual training and growth until death, but physical strength is usually perfected before the twenty-fifth year and often by the twentieth year. All of these arrows point in the same direction, and they all indicate that physical training should be the major subject, if not the paramount subject, in the training of little children, and that the time might well be decreased as the maturity of the body is approached.

FORMING A HABIT OF PLAY.

One of the best things about the system of physical education in the typical English preparatory and public school is that the students are supposed to get out and play every afternoon, as soon as their lessons are over. These exercises are practically required up to the sixth form in the public school, and by that time the habit has been so well established that the student continues to play during his university course and probably during the rest of his life, from the force of this early custom.

Leisure is increasing all over the world to-day, and with great rapidity in the United States. Every year a number of new States and cities pass the eight-hour law for public work. Every year certain trades secure a reduction in working hours, and the age at which children may go to work is raised in several States; the working hours of women are steadily reduced. In the aggregate this means the gain of millions of hours of leisure to the people of the country every year, and it is becoming important for the school to train for leisure, as well as to train for work. The school must give the boy and girl games that may be played throughout life, and it must establish play habits which will lead to the continuance of play. Supt. Wirt says he has taken the "street and alley time" of the children for organized play. In the old days on the farm the time after school was required for doing chores, but there is no use for this time in the city. The children left to themselves play little. This may seem a very radical statement, but I have gone over cities repeatedly with notebook in hand and watched what the children were doing. I have found nearly 90 per cent of loafing to 10 per cent of play. It is doubtful, if the credits and debits of this time were balanced, that anything on the positive side could be shown resulting from it. To devote these hours at all of our schools to organized play would be almost a pure gain in itself and would also tend to establish a

habit that would be of great value all through life. It would be better for us all, and we should probably accomplish more, if we could spend the hours from 4 or 5 until supper in play every afternoon.

Play is the only available system of physical education in the majority of cases. Our schools are not provided with gymnasiums as a rule, and little children do not usually take kindly to gymnastics. It may be said that it is unnecessary to make any formal provision for play, as we can merely keep them out of school and let them play. The answer is that play of small groups of little children left to themselves runs mostly to the dramatic types. It is not vigorous enough to give physical training. If they are turned out to play in the school yards by themselves, it will be found in general that not more than 10 or 15 per cent of them are playing at any sort of vigorous game. The play must be organized, if it is to secure results. In the preparatory schools of England there is about two and one-half hours of required play immediately after school every day. In Germany there are three periods of required physical training a week in every grade of the elementary school. In all grades a part of this time is devoted to play and in the lower grades nearly all of it is often so devoted. Besides this, many schools have what is known as the compulsory-play afternoon, one afternoon a week. In many of our private schools in the country, such as Groton, Lawrenceville, and St. Pauls, play is required in the fall and spring and gymnastics in the winter. In most of our city school systems we have had the curious anomaly of beginning physical training in the high school and requiring gymnastics indoors, while giving no credit for exercise in the form of play in the yard, which, besides exercise, offers open air, relief and recreation from study, the training of the judgment and the will, and the good fellowship and social adaptation of team games. If there is any justification for gymnastics in the high school, then organized play in the elementary school requires no justification, and the school can afford to furnish the time for it. There are school systems that are now giving to play from one to five periods a week in the lower grades, but in no case, with the possible exception of Gary, is the time sufficient.

A DIRECTOR OF PHYSICAL TRAINING.

Supt. Wirt manages to get along without a director of physical training for the city by employing experts in each ground. This is possible because Supt. Wirt is himself an expert, but for most cities the absolute prerequisite of a play system that is worth while in connection with the schools is that the city have or employ a competent director of physical training. This person must plan what is to be done, arrange tournaments and contests, teach folk dances, arrange

exhibitions, gala days, and play festivals. As he will deal largely with untrained people, he must also train his teachers. The physical director should have his long vacation in the winter time in most cases and have charge of the playgrounds all through the summer. The position deserves an adequate salary, and a capable man should be secured. If his salary is the same as that of the principal of the high school it will not be far wrong.

A TEACHER AT EACH GROUND.

There will be no play on the school grounds that is worth while unless there is a teacher or physical director in charge. This teacher should have charge after school until dark; after supper until about 10, if the ground is lighted; on Saturday mornings at least; and all through the summer. Where the ground is kept open at night, it is highly desirable that a special playground teacher be employed, but if the playground is open only after school and on Saturday mornings, regular teachers from the schools may be utilized for the work, receiving from \$15 to \$25 per month additional for it. During the summer time full time and full pay are, of course, needed.

LIGHTING THE SCHOOL PLAYGROUND.

It is not the school children alone who need to play. In some ways the problem of the working boys and girls is more acute than that of the school children. Most of the former are engaged in monotonous tasks, and the spirit of youth recoils from them at night, and they go to the dance hall, the saloon, the picture show, or worse places. They must have their recreation at night, because they are working during the day. For two or three hundred dollars, it is possible to light a school playground so that it can be used for basket ball, volley ball, and indoor baseball at night, and also for folk dancing and various forms of athletics. If the school has a swimming pool and gymnasium and auditorium, these will furnish to all the young people nearly the same facilities as the Y. M. C. A. and Y. W. C. A. possess, and will make an attractive center for the young life of each community. More and more such ground should attract business men and their wives to come out after supper and play with their children the games that the playground offers. I recently witnessed a game of soccer between two teams of adults from the evening school, which took place at night on one of the playgrounds of Gary, Ind. Mr. Wirt has shown that the number using the gymnasiums and playgrounds of the Emerson School is nearly equal to the numbers using the 11 gymnasiums and playgrounds of the South Park system of Chicago; and the cost of installation in Gary is about one-twentieth of the cost in Chicago, and the cost of maintenance is about one-sixth as much.

PLANNING THE SCHOOL GROUND.

Very often not more than half of the possible efficiency of a school playground is secured, because the ground has not been properly planned. If the boys wish to play basket ball, they put up the equipment anywhere that there is room for it, regardless of whether it is the proper place for the game or not. If a basket-ball court is placed in the middle of half an acre of ground, it takes practically the whole space, though it does not need more than a fifth or a sixth of it. Games should be assigned to spaces that they will fit snugly, so that they will not interfere with other games in other spaces. Indoor baseball, volley ball, and basket ball should be provided with permanent locations, as this is the only way in which the maximum efficiency of a school yard can be secured.

Indoor baseball.—Every school ground of any size should have at least two indoor baseball diamonds, one for the girls and one for the boys. The regulation diamond is 35 feet square, though the 27-foot diamond is better for small children. This should be laid out permanently, and the places for the bases marked. Bases should be made of sacks filled with sand. The 17-inch ball should be used in the smaller grounds, and the diamond should be so placed that the ball will not be batted over the fence or against the school building.

Volley ball.—Volley ball is the best game for school yards in general, because it takes very little space, and nearly all the children can play. It is the natural corrective of nearly all the bad postures of the schoolroom. The equipment costs very little. From two to four teams should be organized from each of the upper classes, and they might well have volley ball as a period of physical training in the regular school time at least once a week.

Tether ball.—Tether ball is another game that requires little space, is very vigorous, and can be played in almost any school yard. Directions for this game and for volley ball can be secured from the Spalding Athletic Library for 10 cents. Both sets of rules are in the same book. The lines around and bisecting the pole are best put in with brick.

Skating.—In the northern part of the country it is sometimes well to flood a part of the yard in winter for skating. All that is necessary in cold weather is to make a low embankment at the edge, so that the water will not run off, and to turn on the school hose.

EQUIPMENT FOR GAMES.

When it is determined to have a play ground in a school yard, the first thing to be provided should be the apparatus for playing games. This should consist of about 1 dozen indoor baseballs, three or four volley balls, one or two basket balls, and half a dozen tether balls, ball

clubs, tennis nets, and tennis rackets for tether ball. All of this property is for common use and should be furnished by the school. If a boy brings his baseball to the school, he will get no more good out of it than the 17 other boys that play in the game with him. There is no reason why one boy should furnish such equipment to the school. The same argument applies with still more force to volley balls and basket balls. They are useless to the individual child, and they are awkward to carry from place to place. Adequate play in games such as these can not be had unless the school furnishes the necessary apparatus.

EQUIPMENT FOR ATHLETICS.

School yards are not very well suited for athletics in general in most cases, but there are two or three things that can usually be provided with advantage. It is often possible to put in a straightaway 60-yard running track by the fence, so that it will take up very little room, and the children can practice whenever they please. The different dashes, 25, 50, and 60 yards, should be laid off permanently, and the school should provide a stop watch so that the children can be timed occasionally. There should be a jumping pit about 4 feet wide and 12 to 15 feet long, filled with soft sand to the depth of about 8 inches. The take-off board should be set in the ground flush with the surface. Standards should be furnished for the high jump also, as this is even better liked than the broad jump. The school carpenters are usually able to make very satisfactory standards. There should be one or two horizontal bars, which may be homemade or purchased outright. Horizontal bars are often installed in school yards without any provision to lessen the force of a fall. Such bars are very dangerous; one would not think of exercising in a gymnasium without a mat underneath. The earth should be excavated under each horizontal bar, and sand should be provided. The horizontal bar can be used for "chinning" and for many exercises in which the boys take pleasure.

PLAYGROUND APPARATUS.

School authorities are apt to think that the equipment is the most important thing in making a playground. In matter of fact, it is the least important element of all. The thing of first importance is organization; next in importance is equipment for games; next comes provision for athletics; and last such apparatus as swings, slide, etc. It must not be thought from this that the play apparatus should be left out altogether. It is desirable in order to get the children to come to and stay on the playground, but its importance is easily overestimated.



A. PLAYGROUNDS IN GARY, IND.



B. PLAYGROUNDS IN GARY, IND.



A. WADING POOL.



B. CIRCLE BAR, GARY, IND.

A great many cities are now putting equipment into their school yards without consulting anyone of experience; and it must be said that the apparatus so purchased is often temporary in character, ugly in appearance, and dangerous in use. It is often set in the wrong places and sometimes costs two or three times as much as it should. Very much of this, although of recent installation, should be taken out at once and replaced by equipment that is safe and suited to the needs of the school. It must be remembered always that free play is more important than the best possible use of play equipment, such as swings, and the open spaces must not be destroyed for any kind of apparatus.

THE SAND BIN.

The sand bin is the mother of the playground movement, and out of it have grown the other developments. From the time he is 1 year old until he is 10 or 12 the sand will furnish any child entertainment and delight. As the sand bin is for the little children, it should be placed in the most retired part of the yard, where it will be out of the way of the older children. It must have shade, or the sand will get too hot in the summer time. It is well to place it under or around a tree. It should have a molding board or seat around the edge, so that the children can mold the sand upon it. This is often used also as a seat when the teacher wishes to tell a story or to give instruction. The sand should be, if possible, the fine white sand of the seaside, as this is pleasant to work with and does not soil the clothes; but any building sand, such as that used in making plaster, will do. The carpenter of the school board can make the bin. The sand will gradually work out upon the playground, where it will often greatly improve the surface. As it is necessary for the sand to be renewed occasionally to keep it in a sanitary condition, this leakage is a good thing in any case. The sand bin does not require a bottom if the ground is level and hard.

The bin should be made either of cement or of 12-inch planks, with a molding board 8 or 10 inches wide around the edge. It should usually be painted the color of the ground, so that it may not be conspicuous.

SEESAWS.

The seesaw is much used in the school yard, but not much can be said in its favor. The children who are using the seesaw are not getting either physical, intellectual, or social training. It is the frequent source of accidents and disputes. If a short seesaw board is placed on a high standard, it is very dangerous, because it then makes an acute angle when the child goes down to the ground. The long seesaw is safer than the short one, because the angle of the plank in its descent is not so great; but it must be remembered that there

will often be five or six children on each end of the seesaw, and there may be danger of it breaking if it is made long and not well strengthened. The principal danger is that the child who is down on the seesaw may slide off and let the other child down with a bang. I have known of half a dozen broken arms resulting in a week from a new set of poorly made seesaws. Another danger appears when the children stand up on the seesaw. One end comes down suddenly and the other child is thrown off on his head. The seesaw ought to have a handle. It should be made so it can be taken in at night and in the winter. It should be placed near the fence in some retired part of the yard. It is best to set it on a steel support anchored in concrete.

THE SLIDE.

The slide is one of the most popular pieces of apparatus, and will be used almost continuously by a large number of children. There are apt to be disputes and quarrels over the swing, but the slide offers a natural rotation in office. Sliding represents a universal interest of children, for they have slid down banisters and cellar doors from time immemorial. Almost every place that offers a natural incline in the cities will be found to be used by them. People generally have the idea that the slide is dangerous on account of its height, but in an experience of 13 years I have never known of a single serious accident from the slide, except from slivers in the early days when slides were made of pine. Railings at the top prevent the children from falling off there, and after they sit down on the slide they can not well fall unless they try to. There is a general feeling also that the slide is very hard on clothes. I doubt if this is so, if the slide is in good condition. The amount of the friction and wear of course depends on the smoothness. Even in the schoolroom the child wriggles around constantly in his seat, and the seat or the cushion is not usually very smooth. The children tend to run up the slide if they are not watched at first, and also to slide down standing up. If a slide is scratched and marked with nails, it is much more destructive of clothes. The crucial thing about it is the condition of the incline itself. In the early days these slides were often made of pine. The pine could be made very smooth and safe, but after a rain the grain was likely to come up so that a child might be impaled on the slivers as he slid down. Most of the machine companies now make a steel slide. This is well galvanized, but the galvanizing is apt to wear through where the children place their feet, causing the metal to rust. A rusty slide both soils and wears the clothes very rapidly. The steel slide is too cold in winter and too hot in summer for much comfort. It is also too expensive to be generally purchased. W. S. Tot-hill, of Chicago, makes a maple slide that answers all requirements

very well. It does not rust or splinter. It is not too hot nor too cold; it sometimes warps, but never seriously. The 9-foot slide is sold by Marshall Field & Co. for \$15; the 15-foot slide for \$30. The slide needs to be waxed occasionally or dressed with raw linseed oil. It is well to have a carpet mat or two to sit on after rains or after oiling, and it is desirable that the apparatus should be made so that the sliding board is detachable, allowing it to be turned over or taken in so as to protect it from the rain. It is difficult to take the slide in at night, and a board may be chained in the slide or a chain may be put around it to prevent its use at night.

SWINGS.

The swing is probably the commonest piece of apparatus for the play of small children everywhere. It is also one of the most dangerous, and, as generally made, one of the most unsightly. It probably causes more quarrels than any other one piece of apparatus and more criticism from its use at night than anything else about the playground. In unfenced school grounds the swings should be made so that they can be taken down or chained at night. It is best as a rule to make the swing frame of 3-inch gas pipe, if threaded; or of 2-inch uprights and 3-inch horizontals, if unthreaded. Two-inch galvanized pipe will cost about 16 cents a foot, and the 3-inch pipe about 32 cents a foot. Black pipe will cost about two-thirds as much. The swing should be well braced and set in concrete about $3\frac{1}{2}$ or 4 feet deep. The swings for a school yard should not be over 8 or 10 feet high. The tall swing takes up too much room, is preempted by the large children, and is too dangerous. The swings should be placed in the most retired corner of the yard and parallel with the fence, where children will not be struck by them. People are apt to fear that the children will be hurt by falling out of the swing. This rarely happens. The real danger is to the child who is running by. If two children are standing up in a swing and swinging hard and another child runs by and is struck in the side of the head, he will certainly be seriously injured and may be killed. In some places the swings are fenced off so as to prevent this. A piece of rubber hose is sometimes nailed to the side of the swing board so as to deaden the blow if a child is struck. For the school yard it is best to have as light a swing as possible, because its momentum is not so great in that case, and it is easier to put out and take in. A wooden board and ropes are to be preferred to an iron seat and chains or links. The steel hook that supports the swing is a crucial point, as it is apt to wear through. It should be made of hardened steel and should wear on a steel thimble around which the rope is spliced. Girls should not be allowed to stand up in swings, as their dresses tend to fly up. Boys should not be allowed

to swing girls for still more obvious reasons. It is best for children to swing themselves in any case, as that is the only way they can get any exercise out of it. The pipe fittings can be purchased of any of the machine companies. The pipe can be secured of local dealers, and all should be erected by local men. The swings can also be made satisfactorily by any ingenious carpenter. The pipe should either be galvanized or painted green. The concrete blocks should be 16 to 18 inches square. There should be about 20 swings in the yard of a good-sized city school.

THE GIANT STRIDE.

The giant stride is often put into school yards. It is always enjoyed by the children and has some value as exercise. It is a rather expensive piece of apparatus, however, and the steel ladders are rather dangerous. For the school yard I prefer the rope and wood ladder with wooden rungs. This is lighter and does not bruise where it strikes. It is also much easier to take in the ropes when that is desired. The giant stride should be placed in the corner of the yard, if possible, so that it may be out of the way of the games and that the children upon the ground may not be struck by those who are flying around upon it.

THE SCHOOL MENAGERIE.

Children are nearly always fond of animals. It is they who are the chief patrons of the zoological gardens everywhere. The opportunity to see the pigs and the cows and the chickens constitutes one of the chief charms to them of the trip to the country. It would be well if there were animals to feed and watch in every school yard. It would be still more delightful if rabbits and squirrels could run about on the playgrounds among the children and not be harmed. There is a "coon tree" in the yard of the Emerson School, at Gary, Ind. There is a house at the foot of the tree into which the raccoons may descend and where the children may go to make their acquaintance. In the yard of the Froebel School there is a large fountain that will be stocked with fish. It would be well to put bird and squirrel boxes in the trees and to encourage the children to feed the birds and squirrels if the attitude of the children makes this practicable.

CONSTRUCTION OR PURCHASE OF EQUIPMENT.

A school playground may be satisfactorily equipped for \$200, if most of the equipment is made and set up by local men. The slide can probably be purchased as cheaply as it can be made. Other pieces of apparatus will cost considerably more from the machine companies.



PRELIMINARY STATEMENTS BY
CHAIRMEN OF COMMITTEES OF THE COMMISSION OF
THE NATIONAL EDUCATION ASSOCIATION

ON

THE REORGANIZATION OF
SECONDARY EDUCATION



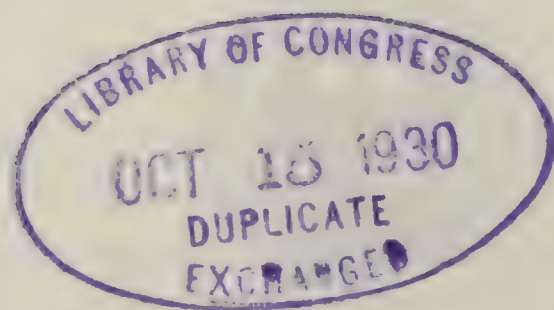
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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, September 23, 1913.

SIR: The whole problem of secondary education, both as to aims and as to methods, is now undergoing investigation. The demands for the readjustment of the work of the high school are insistent. This bureau has no specialists in secondary education and is unable to respond as it should to the many requests for information in regard to the trend of thought on this subject and for advice in regard to the organization and readjustment of high-school systems. It, therefore, welcomes all the more heartily the cooperation of the commission of the National Education Association on the reorganization of secondary education. This commission is attempting, as the first step in the more thorough study of the high school and its work, to collect the best opinion in this country in regard to the aims and methods that should prevail in secondary education. The accompanying manuscript consists of preliminary statements by the several chairmen of this commission. Their publication for distribution among principals and teachers of high schools and students of secondary education for their criticism will greatly facilitate the work of the commission. I, therefore, recommend that they be published as a bulletin of the Bureau of Education. The final report of the commission should then be published as a revision of this bulletin.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

THE REORGANIZATION OF SECONDARY EDUCATION.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON ARTICULATION OF HIGH SCHOOL AND COLLEGE.

ORIGIN OF THE COMMISSION.

The commission on the reorganization of secondary education is a logical outgrowth of the first report of the committee on the articulation of high school and college presented in 1911. At that time the committee submitted a broad definition of a well-planned high-school course and recommended the liberalizing of college entrance requirements so that the satisfactory completion of any such well-planned high-school course should be accepted as preparation for college. This report was widely distributed, and its recommendations are receiving approval by an increasing number of educational associations, colleges, and State boards of education.

It was recognized that such liberalizing of college entrance requirements would bring to the high school not only greater opportunity for usefulness, but also increased responsibility for the reorganization of secondary education. Consequently, in 1912, this committee recommended the appointment of subcommittees to report upon the reorganization of the various high-school subjects. Accordingly, 10 subcommittees were appointed by the president of the National Education Association during the ensuing year. Great care was taken in the selection of these committees. Many people, including each State superintendent, were asked to suggest persons best qualified for this important work. The members are well distributed geographically, 30 States being represented.

In 1913 the committee on the articulation of high school and college recommended the formation of a commission to include the committees already organized, a committee on mathematics, a committee on art, and a reviewing committee. This report was adopted by the secondary department of the National Education Association, and the formation of the commission was authorized by the board of directors of that association July 13, 1913.

RESULTS TO BE SECURED.

It is hoped that this commission will—

(a) Formulate statements of the valid aims, efficient methods, and kinds of material whereby each subject may best serve the needs of high-school pupils.

(b) Enable the inexperienced teacher to secure at the outset a correct point of view.

(c) Place the needs of the high school before all agencies that are training teachers for positions in high schools.

(d) Secure college entrance recognition for courses that meet actual needs of high-school pupils.

MEMBERSHIP OF THE COMMISSION.

The commission will consist of the following 14 committees:

(a) Twelve committees on various high-school subjects, 10 of which were appointed in 1912-13.

(b) The committee on the articulation of high school and college, organized in 1910-11.

(c) A reviewing committee composed of the chairmen of the preceding committees and not more than 10 "members at large."

The chairmen of the committees already organized are as follows:

Committee on English—James F. Hosis, Chicago Teachers' College, Chicago, Ill.

Committee on social studies—Dr. Thomas Jesse Jones, Bureau of Education, Washington, D. C.

Committee on natural sciences—William Orr, deputy State commissioner of education, Boston, Mass.

Committee on ancient languages—Dr. Walter Eugene Foster, Stuyvesant High School, New York, N. Y.

Committee on modern languages—William B. Snow, English High School, Boston, Mass.

Committee on household arts—Dr. Amy Louise Daniels, University of Missouri, Columbia, Mo.

Committee on manual arts—Prof. Frank M. Leavitt, University of Chicago, Chicago, Ill.

Committee on music—Will Earhart, director of music, Pittsburgh, Pa.

Committee on business—A. L. Pugh, High School of Commerce, New York, N. Y.

Committee on agriculture—Prof. A. V. Storm, University of Minnesota, St. Paul, Minn.

Committee on the articulation of high school and college—Clarence D. Kingsley, high school inspector, Ford Building, Boston, Mass.

The full membership of each of these committees, with two exceptions, is given in this bulletin at the end of the statement of the chairman of that committee. It is probable that some of the committees will be enlarged.

Math, Inter
Art added

PLAN OF WORK.

Several committees have already made substantial progress; two joint conferences were held in Philadelphia, one in December, 1912, and the other in February, 1913; and preliminary reports were discussed at various round tables of the National Education Association, July, 1913.

The reviewing committee will probably meet for a three-day conference at the University of Chicago, December 29, 30, and 31, 1913. At this conference reports of the various committees will be considered in detail, modifications will be suggested, and the results will be published as the first report of the commission. It is hoped that this first report will be sent to every high school in the United States.

In July, 1914, there will be opportunity for a free discussion of the reports at various meetings of the National Education Association.

The final report of the commission is not expected before 1915.

Each person receiving this bulletin is urged to send suggestions and criticisms to the chairman of the appropriate committee.

CLARENCE D. KINGSLEY, *Chairman.*

FORD BUILDING, *Boston, Mass.*

The other members of the committee on the articulation of high school and college are as follows:

William M. Butler, principal Yeatman High School, St. Louis, Mo.

Frank B. Dyer, superintendent of schools, Boston, Mass.

Charles W. Evans, supervisor of English, East Orange, N. J.

Charles H. Judd, professor of education, University of Chicago, Ill.

Alexis F. Lange, dean of college faculties, University of California, Cal.

W. D. Lewis, principal William Penn High School, Philadelphia, Pa.

William Orr, deputy State commissioner of education, Boston, Mass.

William H. Smiley, superintendent of schools, Denver, Colo.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON ENGLISH.

In order that the report of this committee may represent as fully as possible the results of study and experiment in every quarter, the cooperation of all existing organizations interested in the problem has been and will continue to be sought. The national conference on uniform entrance requirements in English, on May 30, 1911, instructed its executive committee to cooperate; in like manner the National Speech Arts Association and the conference on public speaking of the New England and the North Atlantic States directed appropriate committees to render aid.

The National Council of Teachers of English is yet more closely associated with the work. This council is broadly representative in the character of its membership, both individual and collective, and is thus well fitted to join in the enterprise. The members of its committee on the high-school course, which recently collected information for a report on types of organization of high-school English, are participating actively in compiling a handbook. The members of the committee of the council are as follows:

Franklin T. Baker, teachers' college, Columbia University, New York, N. Y.

Elizabeth G. Barbour, girls' high school, Louisville, Ky.

C. C. Certain, high school, Birmingham, Ala.

Allison Gaw, University of Southern California, Los Angeles, Cal.

Mrs. Henry Hulst, Central High School, Grand Rapids, Mich.

William D. Lewis, principal, William Penn High School, Philadelphia, Pa.

E. H. Kemper McComb, Manual Training High School, Indianapolis, Ind.

Edwin T. Reed, Agricultural College, Corvallis, Oreg.

Elizabeth Richardson, girls' high school, Boston, Mass.

James Fleming Hosic, chairman, Chicago Teachers' College, Chicago, Ill.

It may be noted by comparing the above list with the names of the committee appearing at the end of this statement that the committee of the council contains three members, including the chairman, who are also members of the committee in the commission on the reorganization of secondary education.

THE POINT OF VIEW.

The committee will endeavor to make a fresh study of English in secondary schools. These schools have developed so remarkably in the past two decades that their function of preparation for advanced academic study is completely overshadowed by other functions. Moreover, these schools serve such various constituencies that the widest possible freedom is necessary. Hence the committee will consider the experience of those who have sought to meet the needs of particular communities. A course which fits the life of the school and prepares young people for the life of the home and of the social and industrial community will, it is now believed, best equip for attendance on higher academic or professional institutions.

With this ideal before them, the various subdivisions of the committee will undertake to select material and outline activities for the successive years of the course. The groundwork of composition will consist of those projects for speaking and writing which young people can be made to feel are worth while. Rhetorical theory will thus be made to serve as the handmaid of expression, not the occasion of it. Books for reading, likewise, will be selected because they are capable of producing a genuine reaction, not because they are illustrative of literary history. In both composition and literature there will doubt-

less be a shift of emphasis toward those subjects and activities which are of greatest value in active life—for example, oral expression—and toward modern books and periodicals. It is not to be inferred, however, that the supreme values inherent in the world's literary masterpieces will be overlooked.

THE PLAN.

A general plan for a handbook has been agreed upon. A section will be devoted to each of the following:

- (1) An account of the origin and labors of the committee.
- (2) A summary of the work in English of the first six years of the elementary school.
- (3) The aims which should guide the English work of the six following years, namely, the seventh and eighth years of the present elementary school and the four years of the present high school.
- (4) A general course of study for the later six years, providing abundant material for choice.
- (5) Several examples of more limited courses as worked out to meet particular conditions.
- (6) A suggestive outline of activities in composition (speaking, writing, spelling, grammar, and rhetoric).
- (7) A suggestive outline of activities in literature (interpretation of poetry, fiction, and drama, reading aloud, dramatization, lives of authors, literary history).
- (8) A list of books for pupils' general reading, with suggestions as to guidance.
- (9) General suggestions as to plans of faculty cooperation in English instruction, size of classes, equipment, etc.
- (10) A bibliography upon the preceding topics.

Such a handbook will be useful to administrators in arranging courses of study and in providing equipment, and it will aid the teacher at work, particularly the teacher of limited experience.

AIMS.

The committee believes that a single statement of aims will prove serviceable as a guide to the English work of all schools. Broadly speaking, it should be the purpose of every English teacher, first, to quicken the spirit and kindle the mind and imagination of his pupils, and to develop habits of weighing and judging human conduct with the hope of leading them to higher living; second, to supply the pupils with an effective tool for use in their future private and public life—i. e., the best command of language which, under the circumstances, can be given them.

The particular results to be sought may be somewhat specifically indicated as follows:¹

I. In general, the immediate aim of secondary English is twofold:

(a) To give the pupil command of the art of expression in speech and in writing.

(b) To teach him to read thoughtfully and with appreciation, to form in him a taste for good reading, and to teach him how to find books that are worth while.

These two aims are fundamental; they must be kept in mind in planning the whole course and applied in the teaching of every term.

II. Expression in speech includes:

(a) Ability to answer clearly, briefly, and exactly a question on which one has the necessary information.

(b) Ability to collect and organize material for oral discourse.

(c) Ability to present with dignity and effectiveness to a class, club, or other group material already organized.

(d) Ability to join in a conversation or an informal discussion, contributing one's share of information or opinion, without wandering from the point and without discourtesy to others.

(e) Ability (for those who have or hope to develop qualities of leadership) to address an audience or conduct a public meeting, after suitable preparation and practice, with proper dignity and formality, but without stiffness or embarrassment.

(f) Ability to read aloud in such a way as to convey to the hearers the writer's thought and spirit and to interest them in the matter presented.

NOTE.—All expression in speech demands distinct and natural articulation, correct pronunciation, the exercise of a sense for correct and idiomatic speech, and the use of an agreeable and well-managed voice. The speaker should be animated by a sincere desire to stir up some interest, idea, or feeling in his hearers.

III. Expression in writing includes:

(a) Ability to write a courteous letter according to the forms in general use, and of the degree of formality or informality appropriate to the occasion.

(b) Ability to compose on the first draft a clear and readable paragraph or series of paragraphs on familiar subject matter, with due observance of unity and order and with some specific detail.

¹ This outline, here considerably modified, was originally prepared by Allan Abbott, of the Horace Mann School, Columbia University, and appeared in the *English Journal* for October, 1912.

- (c) Ability to analyze and present in outline form the gist of a lecture or piece of literature, and to write an expansion of such an outline.
- (d) Ability, with due time for study and preparation, to plan and work out a clear, well-ordered, and interesting report of some length upon one's special interests—literary, scientific, commercial, or what not.
- (e) Ability (for those who have literary tastes or ambitions) to write a short story or other bit of imaginative composition with some vigor and personality of style and in proper form to be submitted for publication, and to arrange suitable stories in form for dramatic presentation.

NOTE.—All expression in writing demands correctness as to formal details, namely, a legible and firm handwriting, correct spelling, correctness in grammar and idiom, and observance of the ordinary rules for capitals and marks of punctuation; the writer should make an effort to gain an enlarged vocabulary, a concise and vigorous style, and firmness and flexibility in constructing sentences and paragraphs.

IV. Knowledge of books and power to read them thoughtfully and with appreciation includes:

- (a) Ability to find pleasure in reading books by good authors, both standard and contemporary, with an increasing knowledge of such books and increasing ability to distinguish what is really good from what is trivial and weak.
- (b) Knowledge of a few of the greatest authors, their lives, their chief works, and the reasons for their importance in their own age and in ours.
- (c) Understanding of the leading features in structure and style of the main literary types, such as novels, dramas, essays, lyric poems.
- (d) Skill in the following three methods of reading, and knowledge of when to use each:
 - (1) Cursory reading, to cover a great deal of ground, getting quickly at essentials.
 - (2) Careful reading, to master the book, with exact understanding of its meaning and implications.
 - (3) Consultation, to trace quickly and accurately a particular fact by means of indexes, guides, and reference books.
- (e) The habit of weighing, line by line, passages of especial significance, while other parts of the book may be read but once.

- (f) The power to enter imaginatively into the thought of an author, interpreting his meaning in the light of one's own experience, and to show, perhaps, by selecting passages and reading them aloud, that the book is a source of intellectual enjoyment.

NOTE.—All bookwork should be done with a clear understanding on the student's part as to what method of reading he is to use and which of the purposes mentioned above is the immediate one. To form a taste for good reading it is desirable that a considerable part of the pupil's outside reading be under direction. To this end lists of recommended books should be provided for each grade or term. These lists should be of considerable length and variety, to suit individual tastes and degrees of maturity.

V. The kinds of skill enumerated above are taught for three fundamental reasons:

- (a) Cultural. To open to the student new and higher forms of pleasure.
- (b) Vocational. To fit the student for the highest success in his chosen calling.
- (c) Social and ethical. To present to the student noble ideals, aid in the formation of his character, and make him more efficient and actively interested in his relations with and service to others in the community and in the nation.

NOTE.—These fundamental aims should be implicit in the teacher's attitude and in the spirit of the class work, but should not be explicitly set forth as should the immediate aim of each class exercise.

PROBLEMS.

The committee has formulated a series of problems which must be worked out. These may be briefly indicated as follows:

I. In general:

- (a) What is the most effective division of the school course? Is it, for example, that which provides for an intermediate school to include grades seven, eight, and nine?
- (b) Should the course be planned by years or by half years (semesters)?
- (c) What minimum of time for class recitations per week should be demanded?
- (d) Should a choice be offered in the twelfth or in any other grade between a general course in English and specialized courses in English, such as commercial English?
- (e) How shall due emphasis be secured for speaking, reading, and writing of the more practical matter-of-fact sort without at the same time neglecting the literary or æsthetic?

II. As to composition:

- (a) How shall progress from year to year be indicated and measured?
- (b) How shall the principles of grammar and rhetoric be sufficiently enforced without over-formalizing the instruction and preventing spontaneity and the operation of specific purposes?
- (c) How much of the time should be devoted to oral composition and what are the proper relationships between speaking and writing?
- (d) To what extent may pupils be taught to criticise their own work and that of their classmates?
- (e) What is the value of the various methods of criticism employed by teachers?
- (f) What reading is essential to the work in composition?
- (g) What cooperation of all departments in the work of establishing right habits of collecting and ordering of ideas and of clear and correct expression of them is possible and desirable?
- (h) What legitimate opportunities for practice in expression does the social life of the school afford and how can these be most effectively utilized?
- (i) What equipment does the work require?

III. As to literature:

- (a) How shall progress from year to year be indicated and measured?
- (b) How shall sufficient knowledge of the backgrounds of literature be insured without defeating the ends of appreciation and a habit of reading books of lasting value?
- (c) How much of the time should be devoted to oral reading and how shall this be made at once a social accomplishment and a gateway to understanding?
- (d) What are the proper limits of the study of literary art in the various years? How shall pupils attain to standards of æsthetic judgment?
- (e) What part should oral and written composition have in the study of literature? What provision should be made for dramatization?
- (f) What principles should determine the selection of books to be read? For example, should American authors have preference?

- (g) How shall pupils be trained in the use of current books and periodicals and in the choice and enjoyment of current plays?
- (h) What responsibility shall the English teacher assume for the general reading of the pupils and for their library training?
- (i) What equipment does the work require?

The members of the committee will welcome information and suggestions from all who are interested. They wish particularly to learn about the work of schools in agricultural and industrial communities which have developed English courses to meet their peculiar needs.

JAMES FLEMING HOSIC, *Chairman.*

CHICAGO TEACHERS COLLEGE.

The other members of the committee on English are as follows:

Emma J. Breck, Oakland High School, Oakland, Cal.
 Randolph T. Congdon, State department of education, Albany, N. Y.
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STATEMENT OF CHAIRMAN OF THE COMMITTEE ON SOCIAL STUDIES.¹

THE POINT OF VIEW.

It is probable that the high-school teachers of social studies have the best opportunity ever offered to any social group to improve the citizenship of the land. This sweeping claim is based upon the fact that the million and a third high-school pupils is probably the largest group of persons in the world who can be directed to a serious and systematic effort, both through study and practice, to acquire the social spirit.

Good citizenship should be the aim of social studies in the high school. While the administration and instruction throughout the school should contribute to the social welfare of the community, it

¹ The term "social studies" is used to include history, civics, and economics.

is maintained that social studies have direct responsibility in this field. Facts, conditions, theories, and activities that do not contribute rather directly to the appreciation of methods of human betterment have no claim. Under this test the old civics, almost exclusively a study of Government machinery, must give way to the new civics, a study of all manner of social efforts to improve mankind. It is not so important that the pupil know how the President is elected as that he shall understand the duties of the health officer in his community. The time formerly spent in the effort to understand the process of passing a law over the President's veto is now to be more profitably used in the observation of the vocational resources of the community. In line with this emphasis the committee recommends that social studies in the high school shall include such topics as the following: Community health, housing and homes, public recreation, good roads, community education, poverty and the care of the poor, crime and reform, family income, savings banks and life insurance, human rights versus property rights, impulsive action of mobs, the selfish conservatism of tradition, and public utilities.

Long as the foregoing list is, it is quite apparent that many more vital topics could be added. It is therefore important to understand that it is not the purpose to give the pupil an exhaustive knowledge of any one of these subjects, but rather to give him a clue to the significance of these matters to him and to his community, and to arouse in him a desire to know more about his environment. It is to help him to think "civically" and, if possible, to live "civically." Teacher and pupil must realize that they are studying living things. They must not be content with the printed page. Everything and everybody in the community must be drafted into the service of the boy and girl striving to become an effective part of the "body politic" and a constructive member of the social group. Companions in the schoolroom and on the playgrounds, workers in philanthropy and reform, Government officials and business leaders, voters and laborers of every class are all material for the classroom and laboratory in social studies.

History, too, must answer the test of good citizenship. The old chronicler who recorded the deeds of kings and warriors and neglected the labors of the common man is dead. The great palaces and cathedrals and pyramids are often but the empty shells of a parasitic growth on the working group. The elaborate descriptions of these old tombs are but sounding brass and tinkling cymbals compared to the record of the joy and sorrows, the hopes and disappointments of the masses, who are infinitely more important than any arrangement of wood and stone and iron. In this spirit recent history is more important than that of ancient times; the history of our

own country than that of foreign lands; the record of our own institutions and activities than that of strangers; the labors and plans of the multitudes than the pleasures and dreams of the few.

In order that the aim described above shall be realized, the committee proposes to outline the five following units of social studies:

- (1) Community civics and survey of vocations.
- (2) European history to 1600 or 1700 (including English and colonial American history).
- (3) European history since 1600 or 1700 (including contemporary civilization).
- (4) United States history since 1760 (including current events).
- (5) Economics and civic theory and practice.

COMMUNITY CIVICS.

The term "civics" is used here to include all the possible activities of the good citizen, whether as an individual or with private organizations or with government. Community civics is intended to acquaint pupils with the civic condition of their own community. Pupils visit in person and study at close range the vital elements of their city, village, or rural area. Personal visitation and first-hand information is a distinctive feature of the course. It insures the reality and simplicity necessary to a vital knowledge of social forces. It tends to dignify those forces and those places which the pupil usually despises because they are familiar. Finally, knowledge of the neighborhood will show the pupil how an effective education will make him a productive citizen.

It is the belief of the committee that such a course should be offered to the pupil as early as his powers of appreciation allow. The advantages of early acquaintance with the civic conditions are: First, that the larger number of pupils in the lower grades would be reached; and, second, that many pupils realizing the value of education would remain longer in school. In view of this conviction it is fortunate that several experiments have been successfully made in the elementary grades. The following account, taken from an article by Dr. J. Lynn Barnard, a member of this committee, describes the methods which he found successful in the elementary grades of his practice school:

In the practice school (fifth to eighth school years, inclusive) of the Philadelphia School of Pedagogy, the following tentative course in civics is gradually evolving, with evident interest to both pupil and teacher:

In the first half of the fifth year a beginning is made with the child's common experience within his home and his school. Gas is the first subject taken up informally and the children are encouraged to tell what they know about it and its uses. The teacher guides the conversation so that it naturally leads to the question of where we get our gas. The gas pipe is traced through the

house to the meter and then to the street. When it is learned that the gas is manufactured at a central plant the children are encouraged to visit it, with teacher or parent, and the result of the visit is a letter or report on what was seen. In like manner the subjects of electricity, water, sewage, and the telephone are considered. After the service of the community to the child has been shown with each of the above, the reciprocal duties of the child to the community are brought out by careful questioning, which follows the lines of the pupils' own observation and experience.

In the second half of the fifth year what the child sees by looking out of the window, at home or at school, is drawn upon for material. For example, the policeman, the fireman, the postman, the street sweeper, the garbage collector, the ash collector are severally taken up in the manner already described, never omitting a possible trip and report or forgetting to emphasize the corresponding duties of citizenship resting upon the young citizens of the class.

During the early part of the sixth year some of the educational institutions of the city are visited, such as schools, playgrounds, parks, libraries, museums, historical buildings and localities. Later in the year visits are made to the various public institutions, such as city hall, bourse, customhouse, mint, armories and arsenals, hospitals, and juvenile court. No regular textbooks are used in the fifth and sixth years, but much supplementary material is introduced by the teacher to aid in the interpretation of what has been observed on the various trips. Among other suitable reading books, special mention ought to be made of Richmand and Wallach's Good Citizenship and Hill's Lessons for Junior Citizens. By the close of the sixth year the pupils have acquired a fund of first-hand civic information and experience of a concrete and practical nature, no attempt having been made to generalize or to discuss political rights or duties from a legal standpoint. In fact, the word "government" is not even used; only the more general term "community."

In the seventh year more attention may safely be given to the end and aim of governmental activity and the way in which public and private agencies unite to accomplish results. For the purpose no better introduction can be found for Philadelphia girls and boys than the beginnings and growth of community action in their home city. They will see how various civic functions, such as street paving and cleaning, and water supply, at first performed by each householder for himself, were gradually taken over by each municipality and performed for all alike. This concrete example of community growth leads naturally to a discussion of the meaning of "community" and "citizenship." The important truth is impressed upon the pupils that they are now citizens of various communities, namely, the home, the school, the playground, the church, the city, the State, the Nation. The family and the home as factors in this community life are particularly emphasized, that the children may rightly appreciate the civic importance of the home. Then follows the story of the making of American citizens out of a constant stream of foreign immigrants, both as to naturalization itself and as to the educative process that may fit the strangers into their new city environment. A series of studies is next undertaken to find out how the community aids the normal citizen in relation to life, health, property, working and business conditions, transportation and communication, education, recreation, religious worship. This is naturally followed by a brief study of how the community takes care of its subnormal citizens, usually referred to as the dependents, the defectives, and the delinquents. Emphasis is placed upon the idea of prevention, or of restoration wherever possible. Poverty, vice, and crime are coming to be recognized as social diseases. This is a fact which every boy and girl should be

made to feel. As each function is discussed, the organization of the city government to do this community work is outlined, with frequent reference to the Philadelphia charter and to ordinances of councils. Careful consideration is given to the cooperation of private agencies with various municipal bureaus and departments, that the pupils may see how community and citizen work together. How the city gets its money to do all it does is briefly explained.

By the time the eighth year is reached the pupil has become so thoroughly grounded in the governmental activities of the city that he is ready to be taken into the larger field of State and Nation. During the first term the work shapes itself as follows: First, how the community aids the normal citizen in his desire for health, security of person and property, business opportunity, education; and second, how the community provides for its unfortunates, by means of charitable and penal institutions. This includes some consideration of the simpler forms of business law and practice, and also some of the commoner types of criminal offenses and the method of their repression and punishment. The governmental organization—legislative, executive, judicial—back of these activities is sketched in outline, both as to selection and control of State officials, not forgetting to discover where the money is found to keep the machinery going. During the second term of the eighth year the pupils learn, as fully as the time permits, how the Federal Government looks after the varied needs and interests of a hundred million citizens and subjects, at home and abroad.

While the study of municipal government is going on, the class is organized on the plan of the Philadelphia city government, so far as practicable, and then according to the commission plan and by an easy transition, when State and National Governments are reached the class takes on those organizations, respectively. This will be recognized as different from the well-known "school city" plan in that the class is organized for purposes of instruction and not for purposes of self-government.

For the seventh and eighth years, a helpful textbook has been found which admirably illustrates the newer civics, Dunn's *The Community and the Citizen*.

It will be observed that throughout the last two years, when the more serious study of civics is being attempted, the order followed is invariably that of the child's own interest and appreciation, namely, from function to structure, from the executive department which does things to the legislative which plans the things to be done and the judicial which interprets and helps enforce those plans; and then, if necessary, to the charter or constitution which lays down the legal powers and duties of each branch of government.

Moreover, the possibilities for cooperation between the community, acting through government, and the citizens, young and old, acting singly or in voluntary associations, is never lost sight of. How great is this departure from the solemn farce of practically memorizing the Federal Constitution—now in vogue in the city of Penn and elsewhere—can best be appreciated by those teachers who are anxiously awaiting deliverance from bondage through long-overdue revision of their prescribed course of study.

While we are waiting for elementary schools to introduce a course such as Dr. Barnard has outlined, it is recommended that high schools undertake this work in a form adapted to their pupils. It is probable, however, that a brief review of community civics and further attention to a survey of vocations will be a valuable introduction to high-school education even though the pupils have had the elementary course in the grades.

The subject matter of community civics will vary with the community in which the school is located. Communities differ almost as much as individuals. There are the large cities, the villages, and the open country. They differ also as to the characteristics and occupations of the people. It is the hope of the committee to prepare outlines for each of the main types of communities, certainly for rural and urban. The topics given below are merely suggestive.

An explanation of the value of "community health" as one of the topics for this introductory course will make clear the various elements to be considered in selecting topics. The value of a topic for this course depends upon its intrinsic importance to the pupil as a citizen or potential citizen; upon the possibility of presenting it to the boy or girl mind; upon the attitude of the community toward the subject, such as sensitiveness to the discussion of unfavorable conditions; and upon its relation to other studies. There is probably no subject which so well meets all of these requirements as community health. Certainly there is no other topic of more immediate interest to everyone. Health can be made so concrete that even a child can understand much about it. While the community may be sensitive about certain conditions, it is possible to present the facts so definitely as not to injure the teacher's influence. Community health and civic biology when taught in the same school seem to overlap, and yet with the cooperation of the teachers one course should help the other. Civic biology goes to the health department and observes the microscopic analysis of sputum and the multiplication of bacteria in milk. Community health considers the economic loss caused by deaths from impure milk. Civic biology explains what is meant by "death from preventable causes"; community health shows the scandalous carelessness of a social system that permits 650,000 deaths from preventable causes every year in the United States, and then points out civic remedies.

Each of the following topics has been selected with due reference to the foregoing requirements. The logical and complete presentation of civics must wait until a later period in the education of the pupil. In this earlier period the immediate needs of the pupil receive special consideration:

1. Community health.
2. Public recreation.
3. Public utilities, such as roads, street cars, water, gas, and electricity.
4. Family income.
5. Savings banks and life insurance.
6. Poverty, its prevention, and the care of the poor.
7. Crime and reform; juvenile courts.
8. Classification of population with reference to age, sex, occupation, and nationality.
9. Urban life.

10. Rural life.
11. Conservation of the soil and of other natural resources.
12. Human rights versus property rights.
13. Impulsive action of mobs and selfish conservatism of tradition.
14. Social phases of education and the larger use of the schoolhouse.
15. Government machinery.

SURVEY OF VOCATIONS.

The second part of the first unit is a survey of vocations. The following statement, prepared by Mr. William A. Wheatley, a member of this committee, describes his experience with such a course under his supervision:

While the English, biology, and possibly physiography can and should contribute to a knowledge of vocations, a survey can be adequately accomplished only by making it a distinct subject.

In the half-year course in vocations in the Middletown (Conn.) High School there are studied by the boys 50 of the common vocations, including professions, trades, and other life occupations. A similar course, but somewhat briefer, is being organized for the girls.

In studying each of the vocations we touch upon its healthfulness, remuneration, value to society, and social standing, as well as upon natural qualifications, general education, and special preparation necessary for success. Naturally we investigate at first hand as many as possible of the vocations found in our city and vicinity. We have each pupil bring from home first-hand and, as far as practicable, "inside" facts concerning his father's occupation. We also invite local professional men, engineers, business men, manufacturers, mechanics, and agriculturists to present informally and quite personally the salient features of their various vocations. However, strange as it has seemed to us, these experts, not being teachers, often miss the mark completely and present phases of their work of little interest or value to the pupils, although each speaker has had explained to him carefully beforehand the purpose of the course in vocations and specifically just what is desired in his particular address.

We have found the following works of most value in our work: "What Shall Our Boys Do for a Living?" by Chas. F. Wingate; Doubleday, Page & Co.; "Careers for the Coming Men," a collection of articles, the Sallsfield Publishing Co.; "What Shall I Do?" by J. S. Stoddard; Hinds, Noble & Eldridge; and the general catalogue of the International Correspondence Schools, of Scranton, Pa.

We are confident that this course, besides being intrinsically interesting to the pupils, actually gives them greater respect for all kinds of honorable work, helps them later to choose more wisely their life work, convinces them of the absolute necessity for a thorough preparation before entering any vocation, and holds to the end of the high school many who otherwise would have dropped out early in the race. These results have actually been realized in our practice. Should we then apologize when we ask that this branch be given as much time as commercial arithmetic or commercial geography, or one-half the time given to algebra, or one-sixth the time given to German or French, or finally one-eighth the time given to a course in Latin? A place for it must be found in all our high schools, which are the people's elementary colleges.

At what expense?

HISTORY.

The committee is now prepared to submit only two provisional suggestions on history, namely, first, the conception of history according to which pupils should be instructed; and second, the division of the field of history into three unit courses. This conception of history is so well stated by Prof. James Harvey Robinson, a member of this committee, that we quote from his article in the *Proceedings of the American Philosophical Society*, May-June, 1911.

The older traditional type of historical writing was narrative in character. Its chief aim was to tell a tale or story by setting forth a succession of events and introducing the prominent actors who participated in them. It was a branch of polite literature, competing with the drama and fiction, from which, indeed, it differed often only in the limitations which the writer was supposed to place upon his fancy.

In order to appreciate the arbitrary nature of the selection of historic facts offered in these standard textbooks and treatises, let us suppose that a half dozen alert and well-trained minds had never happened to be biased by the study of any outline of history and had, by some happy and incredible fortune, never perused a "standard" historical work. Let us suppose that they had nevertheless learned a good deal about the past of mankind directly from the vast range of sources that we now possess, both literary and archaeological. Lastly, let us assume that they were all called upon to prepare independently a so-called general history, suitable for use in the higher schools. They would speedily discover that there was no single obvious rule for determining what should be included in their review of the past. Having no tradition to guide them, each would select what he deemed most important for the young to know of the past. Writing in the twentieth century, they would all be deeply influenced by the interests and problems of the day. Battles and sieges and the courts of kings would scarcely appeal to them. Probably it would occur to none of them to mention the battle of Issus, the Samnite wars, the siege of Numantia by the Romans, the advent of Hadrian, the Italian enterprises of Otto I, the six wives of Henry VIII, or the invasion of Holland by Louis XIV. It is tolerably safe to assume that none of these events, which are recorded in practically all of our manuals to-day, would be considered by any one of our writers as he thought over all that men had done, and thought, and suffered, and dreamed through thousands of years. All of them would agree that what men had known of the world in which they lived, or had thought to be their duty, or what they made with their hands, or the nature and style of their buildings, public and private, would any of them be far more valuable to rehearse than the names of their rulers and the conflicts in which they engaged. Each writer would accordingly go his own way. He would look back on the past for explanations of what he found most interesting in the present and would endeavor to place his readers in a position to participate intelligently in the life of their own time. The six manuals, when completed, would not only differ greatly from one another, but would have little resemblance to the *fable convenue* which is currently accepted as embodying the elements of history.

Obviously history must be rewritten, or, rather, innumerable current issues must be given their neglected historic background. Our present so-called histories do not ordinarily answer the questions we would naturally and insistently

put to them. When we contemplate the strong demand that women are making for the right to vote we ask ourselves, "How did the men win the vote?" The historians we consult have scarcely asked themselves that question, and so do not answer it. We ask, "How did our courts come to control legislation in the exceptional and extraordinary manner they do?" We look in vain in most histories for a reply. No one questions the inalienable right of the historian to interest himself in any phase of the past that he chooses. It is only to be wished that a greater number of historians had greater skill in hitting upon those phases of the past which serve us best in understanding the most vital problems of the present.

The three unit courses in history that the committee intends to outline are as follows:

(1) European history to 1600 or 1700 (including English history and colonial American history).

(2) European history since 1600 or 1700 (including contemporary civilizations).

(3) United States history since 1760 (including current events).

The best method of abbreviating the work in history to two units, when such abbreviation is necessary, is still an open question.

The plan of the committee is to refer each period to some historian who has given evidence of "skill in hitting upon those phases of the past which serve us best in understanding the most vital problems of the present," with the request that he give us a statement of such phases as are useful to the high-school boy and girl. This material will then be assembled, reviewed, and referred to high-school teachers of history for trial.

ECONOMICS.

[Statement prepared by Dr. Henry R. Burch, a member of this committee.]

The study of that part of economics usually referred to as production and consumption should constitute the major part of the course in economics for high-school students. While the subjects of exchange, distribution, and economic programs should each be given proper emphasis, it is clear that, because of its essentially concrete and objective character, the study of production and consumption forms the natural basis of an introductory course in economics. It is equally obvious that distribution, because so theoretical and abstract, is the most difficult phase of economics for high-school students to grasp.

The concepts of land, labor, and capital should be vitalized by constant reference to the part they play in national life. Under "land" should be treated such topics as the agricultural, mineral, and water resources of the United States, while proper references should be made at appropriate points to the problems of conservation, irrigation, and reclamation. Similarly, under "labor," such concrete topics as immigration, child labor, women workers, and

industrial risks and accidents should be treated. Under "capital" should be included, in addition to the necessary theoretical discussion on the subject, related concrete problems regarding banks, corporations, trusts, and the effects of increased capital on social happiness.

This study of land, labor, and capital should be followed by an analysis of the productive system of the United States. Here we may trace the development of American civilization along agricultural, industrial, and commercial lines. The present status of American agriculture, with its remarkable possibilities for future development through soil conservation and agricultural science, should be grasped by the pupil. The great industrial structure that has been built up by means of inventions, large-scale production, trust organization, and labor cooperation should be outlined. Finally, the pupil should be led to appreciate the wonderful advance in transportation facilities and the attempts to keep the activities of corporations within the control of the Government.

Concrete economic problems should be taken up wherever possible in connection with that factor of production to which it is most closely related. A subject like trusts, for example, may be treated under the caption of "business organization." The development of the trust from the early forms of business organization through the corporation to the holding company may be described and followed by a more careful study of the details of trust organization. Its advantages and disadvantages may be pointed out and the efforts of the Government to regulate its activities described. If time permits (as in a commercial course, where a year instead of a term is often devoted to the study of economics), the problem may be studied more thoroughly by investigating the actual workings of some well-known organization, such as the United States Steel Corporation or the Standard Oil Co. of New Jersey.

In presenting other phases of economics, the same general treatment should be observed. Every effort should be made to have the pupil realize the importance of investigation and comprehension of the industrial world of which he is a part. For example, under "exchange," it is not so important that the high-school pupil understand the laws of value and price as that he shall know the effect of monopoly on price, the actual functions of money and credit, or the operations of the modern promoter and financier.

In discussing the distribution of wealth, theory necessarily plays an important part. Even here, however, theories may be made real. Constant applications of the theories of rent, interest, profit, and wages are essential to their comprehension by the pupil of high-school age. Diagrams and illustrations from everyday life should be employed. The statement of those theories should be so simple and

their application so frequent as to dispel the atmosphere of mere theory.

In concluding a study of elementary economics, the pupil should be acquainted with some of the more important programs of economic reform at present engaging the attention of social workers. The student should, at the end of the course, be in a position to see just what social workers, single taxers, socialists, organized-labor advocates, and government-regulation enthusiasts are trying to accomplish. The ideal of individual and social welfare will in this manner be impressed upon his mind and serve as an inspiration for his life work.

CIVIC THEORY AND PRACTICE.

In comparison with community civics, this course stresses the formal elements of civic thought. One of the main purposes here is to help the pupil determine the mutual relation of the forces and events which he has been observing and studying throughout his school days. Such works as Wilson's "State," Bryce's "American Commonwealth," and Beard's "American Government and Politics" will give the pupil a deeper insight into the social actions of mankind. A few titles from two of these books indicate the type of knowledge that should be obtained by the pupil:

Wilson's "State." Chapter I. Early forms of government; government rested first on kinship; early history of the family; kinship and religion; reign of custom; competition of customs; individual initiative and imitation. Chapter XIII. The nature and forms of government; government rests on authority and force; true nature of government; new character of society. Chapter XIV. Law; its nature and development. Chapter XVI. The objects of government; society greater than government; the state and education.

Bryce's "American Commonwealth." Chapter 4. Nature of the Federal Government; the House at work. Chapter 5. The committees of the House. Chapter 9. General observations on Congress. Chapter 29. Direct legislation by the people. Chapter 39. The working of city government. Chapter 54. Composition of political parties; appendix, the lobby. Chapter 62. How the machine works. Chapter 68. The war against bossdom. Chapter 74. Types of American statesmen. Chapter 78. How public opinion rules. Chapter 84. The tyranny of the majority. Chapter 97. Woman suffrage. Chapters 98-99. The fault and strength of American democracy.

Frequent use will be made of well-written reports published by public and private organizations on such topics as sanitation, housing, pure food, child labor, recreation, and social education. Emphasis on the formal study must not be permitted to crowd out the observation of actual conditions nor such experience in social service as the time will permit.

The following tentative outline is offered only as indicating the points of emphasis. It is given also in response to demands for

immediate aid by teachers who desire to reorganize their work in civics.

I. Government and public welfare.

Fully two-thirds of the time should be devoted to this topic. Here the pupil studies those activities of the Government which influence his life more frequently than those ordinarily classified under the next topic—Government machinery. Here he learns how broad is the work of the Government and how intimately it influences the life of the individual. The real meaning of government dawns upon the pupil when he learns of the roads, of the weather, of mineral resources, of labor and commercial conditions, and of many other things too numerous to mention. Nongovernmental organizations engaged in work for social improvement should be discussed in connection with the governmental functions to which their efforts are most closely related.

The following topics are suggested: (1) Health and sanitation: Housing, pure food and milk, sewerage, waste disposal, contagious diseases, statistics, medical inspection of school children, health crusades. (2) Education. (3) Recreation. (4) Charities. (5) Correction, juvenile courts, reform schools, etc. (6) Public utilities: Transportation, light, telephone, telegraph, postal system, water, etc. (7) City planning: Sanitation and beauty.

II. Government machinery.

Local, State, National; legislative, executive, judicial; courts and legal processes; election and political activities, including such topics as initiative and referendum.

III. The development of government.

Social psychology, democracy, the family, and other social organizations.

THOMAS JESSE JONES,
Chairman.

UNITED STATES BUREAU OF EDUCATION,
Washington, D. C.

The other members of the committee on social studies are as follows:

William Anthony Aery, secretary of the committee, Hampton, Va.
J. Lynn Barnard, School of Pedagogy, Philadelphia, Pa.
H. M. Barrett, principal East High School, Denver, Colo.
F. L. Boyden, principal of academy, Deerfield, Mass.
E. C. Branson, State normal school, Athens, Ga.
Henry R. Burch, Manual Training High School, Philadelphia, Pa.
Alexander E. Cance, Massachusetts Agricultural College, Amherst, Mass.
Miss Jessie C. Evans, William Penn High School, Philadelphia, Pa.
F. P. Goodwin, Woodward High School, Cincinnati, Ohio.
Miss Blanche Hazard, High School of Practical Arts, Boston, Mass.
S. B. Howe, high school, Plainfield, N. J.

- J. Herbert Low, Manual Training High School, Brooklyn, N. Y.
- W. H. Mace, Syracuse University, Syracuse, N. Y.
William T. Morrey, Bushwick High School, Brooklyn, N. Y.
John Pettibone, principal of high school, New Milford, Conn.
- James Harvey Robinson, Columbia University, New York, N. Y.
W. A. Wheatley, superintendent of schools, Middletown, Conn.
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STATEMENT OF CHAIRMAN OF THE COMMITTEE ON NATURAL SCIENCE.

THE OPPORTUNITY OF THE COMMITTEE.

Existing conditions in the teaching of science in secondary schools appear to be favorable for the work of the committee on natural science. Notable progress has been made in determining the sciences which should find place in the program of the high school. Adequate standards of scope and of thoroughness have been established. Progress has been made in the methods and in providing equipment and teaching force. With the recognition of the sciences as essential parts of the high-school program have come ample equipment and adequate teaching force. No high school to-day is considered worthy the name unless it has laboratory facilities. From this vantage ground teachers of science in secondary schools are in a position to study their opportunities and to outline programs for realizing them.

Certain defects of science courses in content and in methods are becoming increasingly apparent. In some respects science teaching is not as closely related to the environment and experience of the pupil to-day as it was a quarter century ago. With the elaboration of apparatus and the increased attention to quantitative methods there has come an aloofness from the experience of everyday life, so that the pupil may secure a high standing in physics, chemistry, or biology without necessarily gaining an understanding of their applications. Moreover, teachers in science in some instances over-emphasize the importance of formal and fixed procedure and, as a result, are not alert to utilize new opportunities.

The failure to adapt science instruction to the real needs of boys and girls has resulted in lack of interest on the part of the pupils and, in many schools, altogether too small a percentage of the pupils elect science courses. It is obvious that science teaching will profit greatly when the experience of instructors in many high schools becomes common property. Interesting and fruitful experiments are being conducted, the results of which are full of suggestion, and one function of this committee is to present a statement of such experiments.

THE ORGANIZATION OF THE COMMITTEE.

In organizing this committee it seemed desirable to recognize the following courses in science and to assign the consideration of each of these to a special committee: (1) Introductory or first-year science. This is also known as general or elementary science. (2) Physics. (3) Chemistry. (4) Geography. (5) Biology, including botany, zoology, and physiology.

The following persons have agreed to act as chairmen: Introductory science—Prof. J. F. Woodhull, Teachers' College, Columbia University, New York. Physics—Prof. C. R. Mann, University of Chicago, Chicago, Ill. Chemistry—Prof. C. R. Elliot, Normal School, Carbondale, Ill. Geography—Prof. Richard E. Dodge, Teachers' College, New York. Biology—James E. Peabody, Morris High School, New York City.

Some doubt exists as to whether the committee on science should include within its study the application of science in such practical arts as agriculture and household arts. Possibly this field of science instruction in the high school may be considered by the committees charged with reporting on these two subjects.

THE PLAN OF WORK.

At the meeting of the committee held in Philadelphia on March 1, 1913, the following plan was adopted:

Each committee is, in the first instance, to define the aims of its particular science as a high-school study. These aims are to be stated primarily in terms of what each individual pupil should secure in appreciation and in power, and secondarily in terms of knowledge and information.

It is of the utmost importance that the pupil should gain power to apply the facts and principles of science and to interpret natural phenomena. For this reason the teacher of science should draw largely from material found in the environment and should by no means confine attention to the statements in the textbook or to the laboratory exercises. The work in science should be so organized as to lead the pupil to acquire skill in manipulating apparatus and in dealing intelligently with facts and phenomena.

As one result of the high-school work in any science, the pupil should increase his store of general information and become interested in reading books on science and in studying phenomena and almost instinctively approach the facts of nature and of industry from the scientific standpoint. It is obvious that in organizing science courses careful attention must be paid to the maturity of the pupil. Work that appeals to the boy or girl of 13 or 14 is not of a nature likely to interest a pupil in the upper classes of the high school, and the converse is equally true.

In addition to the results of science teaching upon the development of the individual, the committee should consider in what ways science instruction may contribute to the well-being and progress of the community. By selecting material for study from the industries of the town or city and by acquainting the pupil with local application of physics, chemistry, and biology the science teacher can develop interest in and promote intelligence regarding community activities. A pupil thus trained should be a better citizen because his habit of mind will lead him to apply the criteria of science to community affairs.

When each committee has determined the aims of science teaching in terms of the gain to the individual pupil and of community progress and welfare, then it should next select the material to be utilized. Each committee should determine what facts and generalizations should be memorized by every pupil. Each committee should also indicate main lines of general reading and of observation, so that the pupil shall be informed in a large way on the scope of any given science and shall show an intelligent interest in current reading relating to science, particularly in its applications to industry and community welfare, including the safeguarding of public health.

Inasmuch as a most valuable part of science work consists in experiments and exercises conducted by the pupil, each committee should prepare a list of projects and exercises. Such projects and exercises may be classified in two divisions:

- (1) Those so essential to an understanding and comprehension of the science that they should be performed by every pupil in the class.
- (2) Those that may properly be performed by individual pupils by reason of personal aptitude and special interests.

The distinction between project and exercise may be stated as follows: An exercise is a piece of work done in the laboratory, while a project is the study of some phenomenon or contrivance outside the classroom and where the pupil, as a rule, in connection with this study constructs some useful device. In addition to projects and exercises set by the teacher, pupils should be asked to bring to class problems gathered from their own experience. All work in every science should be closely related to the experience of the pupil.

Each committee should further keep in mind both the limitations and the special opportunities of the small high school. The work in the high school may review, but should not duplicate, that done in the elementary school. Each committee should also prepare lists of reference books and other lines of reading to be used in high schools.

Inasmuch as the aims of science teaching are to be stated in the first place in terms of the growth of the pupil in power and in appreciation, correct methods are of vital importance. It is much

easier to assign lessons from a text or to follow a prescribed program of laboratory exercises than to constantly and continually adapt and apply both material and methods to the real needs of pupils and to utilize illustrations found in the environment. The methods should be described with sufficient definition and in such detail as to aid a comparatively inexperienced teacher, while at the same time the teacher should be encouraged to think for himself and to initiate methods of his own. When one breaks away from a textbook or from a definite list of laboratory exercises there is danger that the instruction may fail in thoroughness, with resultant lack of respect and regard by pupils for the subject. It is probable that each committee will find it desirable to outline a number of model lessons, each illustrating some method. These model lessons may well illustrate how each of the various aims of science instruction may be attained.

The consensus of opinion of the committee at the conference in Philadelphia was that a survey should be made of existing conditions and practices. Apart from the value of the information thus secured the committee will at the outset come into cooperative relations with science teachers throughout the country. Continued progress in teaching science in our high schools is to be determined very largely by the extent to which teachers in this subject cooperate, in order that conclusions gained as the result of experience and experiment may become known to all.

The committee can also be a means of communication between high-school teachers in science and those who are engaged in the practice of training such teachers. Departments of education in colleges may be informed on the aims and methods of science teaching and thus be enabled to adapt their courses to the real needs of the high schools in their field. By this service the committee can indirectly exercise a most effective influence in advancing the standards of science instruction.

Tentative conclusions should be submitted to the actual test of schoolroom conditions; here, again, an opportunity for cooperation on a large scale will be afforded. As a corollary to this statement it may be said that the work of this committee will not be completed for several years; in fact, it will probably be desirable that, when a given membership of the committee has achieved certain results, the personnel should change in order that those who are qualified to proceed with other phases of the work may be called into service.

WILLIAM ORR, *Chairman.*

FORD BUILDING, *Boston.*

The organization of the committee on natural sciences is not yet completed.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON
ANCIENT LANGUAGES.THE STATUS OF LATIN IN SECONDARY SCHOOLS—QUESTIONS, CRITICISMS,
SUGGESTIONS.

The committee on ancient languages has proposed for answer, or at least for discussion, such questions as these: What is the present status of Latin in the public high schools? In the private schools? Is Latin losing ground, gaining, or merely holding its own? If it is losing ground, what are the principal causes of the decline? If there has been a falling off in the relative number of pupils studying Latin, are the causes to be found in the intrinsic difficulty of the subject, unwise choice of materials, ill-adapted pupils, faulty methods, poorly prepared teachers, crowded curricula, rivalry of modern foreign languages and of the so-called practical subjects, changing college-entrance requirements, narrow or mistaken aims of Latin teachers, changing estimate of educational values, social and economic conditions? If these are the main causes of the decline, are there effective remedies available? If so, what are the remedies? Shall we encourage the great mass of those entering high school to begin Latin, or shall we advocate the policy of limiting the numbers to the ablest pupils? If either plan is adopted, are our present courses, subject matter, and methods best adapted to make the subject attractive and useful to the children who take it? Facts, suggestions, personal experiences, constructive and destructive criticism will be welcomed.

We of the committee believe that Latin is not only one of the most effective educational instruments for general culture, but that it is as well one of the most practical subjects in the curricula of secondary schools. We believe that this assertion is capable of convincing proof. Much work has already been done to demonstrate the value of Latin. There is much more yet to be done. For example, we Latin teachers claim, and for good reasons, that our pupils gain excellent training in English from their Latin studies. Why not attempt to prove this by finding out some of the actual facts? A comparison of the English records of a few thousand Latin pupils with similar records of non-Latin pupils of the same grade for a period of three or four years would establish, at least in some measure, the truth or falsity of our claim. Investigations along similar lines might show what relation the study of Latin bears to success in other subjects.

In various schools throughout the country experiments are constantly made, both in subject matter and in method. The committee invites all innovators, experimenters, and pioneers to make reports of successes and of failures. Some are trying the direct method; some

are using the spoken language, wholly or in part, in recitations; some have discovered various ingenious devices for arousing and maintaining interest and for securing greater efficiency. Others have experimented with new materials and with new uses of old materials. Closer correlation with English and other subjects is on trial. The so-called practical phases are receiving attention. The committee would like to know what has been done and is attempted.

Mr. A. I. Dotey, of the De Witt Clinton High School, New York City, recently made a comparative study of the scholarship records of 1,397 pupils for the first six months in high school. Approximately one-third of these pupils began with Latin, one-third with German, and one-third with French. The purpose of the study was to determine the place in scholarship held by each foreign language group. A detailed study revealed many important facts, all of which, if generally known, should encourage teachers of Latin. Only one of the broad generalizations need be mentioned: The Latin group holds first place in scholarship in every subject.

The writer made a similar study of two groups of pupils, of about 200 in each group. The first group elected Latin on entering high school; the second group, German. A comparison was made of success in English. The comparison was carried through three years—six terms. The Latin group was slightly more successful in English the first term, but the difference was not great enough to excite comment. In every succeeding term, however, the Latin group increased its lead over the German group, until in the sixth term the results in English averaged 20 per cent higher for the Latin group than for the German. Are such results typical? If they are, Latin teachers need have no hesitation in claiming that their subject is intensely practical. In the Stuyvesant High School, New York City, until matters of organization made it impracticable, the Latin boys did as much work in German, for example, in three years as the non-Latin pupils did in four, and often did the work better.

During the seven or eight months since its organization, the committee on ancient languages has held one meeting at Philadelphia. The chairman was present also at a preliminary general meeting in December. With a membership widely scattered, it has not been easy to get the views of the different members on any subject. The Philadelphia meeting helped to a somewhat better understanding of the aims and purposes of the committee. The urgent need of work along broad constructive lines was generally admitted. The same spirit of conservatism which for years has characterized the teaching of the classics still prevails even among members of the committee. This conservative spirit is proper and desirable. The

more radical members may need some check. They should be compelled to sustain the burden of proof when vital changes are proposed. That the time is ripe for a reformation, if not for a revolution, few deny. The responsibility rests with the Latin teachers, whether it be a reformation or a revolution.

Thoughtful teachers of the classics are beginning to suspect that some of the attacks directed against Latin are merited. But many teachers do not appear to see the threatening signs of the times. Some are indifferent through ignorance of the facts or through overconfidence. Perhaps they feel that the place of Latin in our scheme of education is so secure that there is no real cause for fear. To the committee this laissez faire attitude seems indefensible.

There are large numbers of teachers, classical and others, who deeply deplore the present-day attitude toward the classics and fear for their future in our educational system. Profound changes are taking place in our civic, social, industrial, and religious life. Our whole scheme of education, from primary school through university, is feeling the effects of these changes. The subjects and methods which were regarded most highly yesterday are discredited to-day, and the end is not yet.

The high schools have been slow to react to the stimulus of the times. The colleges are responsible in no small measure for this condition. The high school is not yet free from traditionalism and from the domination of college and university. The rigid entrance requirements still tend to cripple and limit the effectiveness of the high schools. In comparatively recent years colleges have developed the elective systems, so far as their own courses are concerned, but they have on the whole been slow to extend that policy to entrance requirements. But conditions are rapidly changing. The day is coming and is almost here when it will be generally recognized that the chief business of a public high school is to fit for life. The college in turn will recognize that this preparation for life is also the best preparation for college. The high schools belong to all the people and must serve the children of all the people. Whatever any considerable number of the people wish to have taught must be taught. If there is not a considerable number of people that wish their children to study a subject, very soon that subject will cease to be taught in our public high schools. In these democratic institutions every subject must stand or fall on its merits.

The fate of Latin lies in our own hands. Do we believe in the subject we teach? Do we believe that it deserves a place, and an important place, in our high schools? Latin lacks the novelty of some of the latest offerings. But time perfects and enriches some things. It should bring no discredit to the study of Latin that it has stood the schoolroom test of some 20 centuries. In the high-

school course of the future what place will Latin take? What are the aims of Latin teaching? We Latin teachers must work out the correct answers to these questions, or others less qualified to decide will answer them for us in a way distasteful to us and injurious to the cause of sound education.

We have just asked ourselves, What are the aims of Latin teaching? The following are some of the aims which seem worth while: To enrich the English vocabulary, both by the addition of new words and particularly by a more perfect mastery and clear understanding of many of the words already in use; to develop an appreciation of word, phrase, and clause relations; to teach clearness and accuracy of expression, both oral and written; to develop habits of industry and application; to make the pupil an intelligent critic of his own oral and written speech and that of others; to lay a good foundation for the study of English and of other modern languages; to read some of the great Latin masterpieces; "to give a wider view of life through familiarity with a great civilization remote from the present, both in place and time, 'in the cool, calm air of noncontemporaneous events.'"

Many of the results of the successful teaching of Latin just mentioned are, so to speak, by-products. It is worthy of remark that these so-called by-products of the study of Latin—the illumination of an English word, of a grammatical principle, or of a fundamental law of language, the causal remark that throws a suggestive side light upon some vital fact of history, of law, of religious and social custom, and upon civilization in general—are the things which cling in the memory long after one has lost the ability to translate a passage from Cicero or correctly to classify a subjunctive or an ablative.

Few who are really competent to form intelligent judgments with reference to the matter would attempt to refute the claim so generally put forward by teachers of Latin, viz, that Latin offers the most effective way of teaching the fundamentals of English grammar or of the grammar of most other modern European languages. Formal grammar is, to the majority of pupils, a distasteful if not a profitless study. The results obtained are by no means commensurate with the time and effort spent. Modern educational theory and practice tend more and more to subordinate this study in our high schools. Most English teachers whose opinions the writer has asked declare that the difficulties of English grammar are much lessened, if they do not entirely disappear in the case of pupils who study Latin. In these days of crowded curricula children who are studying Latin should be excused from formal English grammar and from formal study in their English classes of formation and derivation of English words.

It is one of the traditions of classical study that translation from Latin and Greek is a most valuable training in English expression. So far as the earlier years of secondary teaching are concerned, it is scarcely more than a tradition. It is not fair, however, to lay all or even a large fraction of the blame at the door of the teacher. Under the conditions which ordinarily prevail there is small opportunity for such training in the first year. Isolated words, phrases, and short, detached sentences which have practically no bearing on the interests of boys and girls or on the interests of anybody else afford very narrow scope for training in vigor and clearness of expression. In the second year the difficulties have been multiplied, for an author is read whose works contain all sorts of linguistic snares for the unwary. In order to translate into clear and idiomatic English, one must combine in himself the rare qualities of an accomplished Latin scholar with the powers of expression of a master of English.

The first, as well as the second year's work, is dull and difficult because we insist upon reading Cæsar in the second year. Elaborate analyses are made of the vocabulary and syntax of Cæsar, and practically all beginning books are crammed with these "essentials." The work of the first year is planned, not with reference to the capacities and interests of children, but with reference to the vocabulary and syntax of Cæsar. If the children succeed by heroic efforts in thoroughly mastering a "first year book," which, the editor declares, "fits for Cæsar," they are destined to disappointment. Early in the second year they find that they are not fitted to read Cæsar. Even if pupils were able to read the Gallic War with some degree of ease, it would be a pity to keep boys and girls of 13 and 14 plodding along on Cæsar's Annals for a year. Even the most fascinating story would grow dull if we had to read 10 or 20 lines per day for 200 days, and not everyone finds Cæsar fascinating. If Latin literature, ancient, mediæval, and modern, has nothing more appropriate to offer our children for the second year than the Gallic War, some gifted lover of Latin and of children ought to write, or translate, stories which in content and difficulty shall appeal to the interests and fit the capacities of young people. Latin does not wholly lack such materials.

The subjects for reading should be short and varied. Let us imitate our confrères of the modern languages, who do not make their pupils read dry military and political histories the second year or any other year, but offer bright, entertaining, and varied selections which, while not too difficult, entertain and at the same time instruct. To students in the modern languages, grammar is the drudgery which is relieved by the reading of appropriate texts. To students of Latin, the grammar is no less difficult, but the selections for reading are so

much harder than the grammar that the situation found in the modern languages is reversed.

It is easier to point out defects than to propose effective remedies. The writer does not deceive himself by thinking that the suggestions he is about to make are original or altogether untested by actual experience. If they merely point in the right direction or, failing in that, set others to thinking and working on the problem, the purpose of this paper will be realized.

The writer is of the opinion that the reading of easy Latin should be begun immediately or after a very few introductory lessons. These introductory lessons should aim to supply the minimum of knowledge necessary to an understanding of the very simplest Latin with which the reading begins. From the outset an accurate knowledge of the inflectional forms used should be insisted upon. But these forms should not be learned in parrot fashion, quite apart from their uses. (Right here the direct method might be tried.) The formal paradigms should follow, not precede, the actual use of the forms in translation. A large number of easy oral and, later, written exercises bearing upon and illuminating the story or fable which is read should fix these forms and the necessary syntax firmly in mind. Only so much syntax of moods and cases should be attempted as is absolutely necessary for proper understanding of the easy text read. Relatively few topics of syntax would be studied, emphasis being placed upon the mastery of the forms, the vocabulary, and the art of reading. Correct method of reading, as well as translating, should be insisted upon from the beginning. Words, forms, and principles of syntax should be learned, because needed and when needed in the reading of the text.

It is a pedagogical blunder—fatal to the interest of success of all except the relatively few who have the type of mind that takes pleasure in handling, naming, and putting together the dry bones of the skeleton of a language—to attempt to teach grammatical forms and principles weeks and months before there will be any real occasion to use them. This method has been abandoned by progressive and successful teachers of modern languages, but the teachers of the classical languages, as a rule, still cling to the old, formal method which was unquestionably well adapted to the disciplinary theory of education which prevailed a quarter of a century ago.

The text read, beginning with the simplest and easiest Latin, should, so far as possible, have an interesting and rich content. The fables and myths in the early period of study should be so selected that they would not only provide excellent training in reading Latin, but furnish as well a fund of legendary and mythological lore which would be of great value in the understanding and appreciation of

English literature. If properly taught, the interest in the reading matter would be so great and the relation of the grammatical work to that reading matter would be so direct and clear that an adequate motive for mastering the necessary technicalities of grammar would be supplied.

Now, we may give in the first year that training in accuracy and clearness of expression with which we credit our subject. The translation of the fables, myths, and the like furnishes unequalled opportunities for such training. The teacher may use all his skill in encouraging his pupils to turn the easy, fascinating stories into good English. These same miniature Latin classics may well suggest fruitful topics for oral class discussion. Under wise and enthusiastic direction the boys and girls will be encouraged to write paragraphs on themes suggested by the reading or to read in English additional myths and stories and to talk and write about them.

Without taking issue for or against the so-called direct method of teaching Latin, the writer does not hesitate to affirm from his own experience that a five-minute class exercise in oral Latin in question and answer between teacher and pupils will put life and interest into the dulllest recitation. A few minutes' conversation in Latin in easy sentences about some phase of the story which is being read will be invigorating to both pupils and teacher, and not beyond the abilities of anyone who has any right to teach the subject. There is no quicker way of impressing words and constructions upon pupils' minds. Such oral work, if done intelligently with a definite end in view, not merely stimulates interest, but gives to the pupils the feeling that they are gaining a real mastery over the language.

The pupil should be encouraged to write short original paragraphs in Latin upon some topic about which he is reading. From time to time the teacher should prepare a short anecdote, repeat it in Latin to his class, discuss it both in Latin and in English until the content and vocabulary are familiar, and then request the class to write out and bring in their Latin versions of it for the next day. Some especially appropriate anecdotes or fables should be memorized by the pupils and then used as a basis for oral and written exercises. Pen-and-ink or pencil sketches to illustrate a striking character or incident in the story would give variety and interest to the work.

English grammar should have some part in every lesson. Comparisons and contrasts should constantly be made. The wise teacher will appeal to the pupils' knowledge of English to make clear some point in Latin, and will take advantage of every opportunity the Latin offers to emphasize or clarify the structure or idiom of the English. Whether these similarities and contrasts between the structure of the two languages are consciously in the thoughts of pupil and teacher or not, every well-taught lesson in Latin is a lesson in

English grammar, a lesson also in the universal principles of grammatical relations which underlie most of the modern European languages.

The writer of this paper would be the last person to advocate the policy of attempting to make Latin easy. He is well aware that if, in our desire to popularize the subject, we should devise a course that could be mastered without vigorous effort and continued application, the value of the subject as an effective instrument of education would be greatly reduced. But, on the other hand, there is also the danger that we shall make the subject so difficult, as compared with other subjects in our secondary schools, that our prospective pupils, when they learn of the great "mortality" among those who take Latin, will hesitate to elect a subject in which the percentage of failure is so high. The writer does not hesitate to affirm his belief, which is based upon long experience, that in view of the extended range of secondary-school subjects we Latinists are demanding more than our fair share of the pupils' time and effort. The result of the heavy demands is that fewer pupils are electing Latin, because they feel that such a choice will mean the sacrifice of other subjects of study which appear to them and their parents more essential than a "dead language."

If Latin is to maintain the high place which it has occupied in our scheme of education for so many generations, the teaching of it must be more vital. In content, scope, and method our courses must be adapted to the ability and to the interests of the children. We have been too busy trying to fit the children to the subject, rather than the subject to the children. Speaking broadly, in shaping our courses in Latin in secondary schools, we have approached our problems with college-entrance requirements and the interests of Latin chiefly in mind. Some of the tenderest-hearted of our guild have padded and smoothed the Procrustean bed a little here and there, but it is the same old bed upon which we force our victims to lie. If the subjects of our ministrations writhe and groan, we take their sufferings as evidence that our methods are effective, fortifying ourselves with the assurance that Latin is a "disciplinary" subject, and that "all chastening seemeth for the present to be not joyous but grievous, yet afterward it yieldeth peaceable fruit unto them that have been exercised thereby." We have set an arbitrary standard of attainment and have selected our subject matter with an almost incredible indifference to the psychology of adolescent girlhood and boyhood.

It is the chairman's dearest hope that his committee, during the coming year, while considering the aims, course of study, and methods, may have an eye single to the highest interests of the child. In planning the work of the first two years, at least, one should but

vaguely remember, if not entirely forget, that there are colleges and college-entrance requirements. All of us Latin teachers should constantly remind ourselves that, like the Sabbath, Latin was made for man, not man for Latin.

In closing, the chairman wishes to accept full responsibility for the contents of this paper. While he is confident that a majority of his committee agree with him in general and in particular, it is only fair to state that there are some members who are not in full sympathy with some of the views herein expressed.

WALTER EUGENE FOSTER, *Chairman.*

STUYVESTANT HIGH SCHOOL,
New York City.

The other members of the committee on ancient languages are as follows:

- Charles E. Bennett, Cornell University, Ithaca, N. Y.
- Mary L. Breene, Peabody High School, Pittsburgh, Pa.
- Walter A. Edwards, Normal School, Los Angeles, Cal.
- Calvin Hanna, principal Oak Park High School, Chicago, Ill.
- Nancy Hewitt, principal Albuquerque High School, Albuquerque, N. Mex.
- John C. Kirtland, Phillips-Exeter Academy, Exeter, N. H.
- Gonzalez Lodge, Teachers' College, New York, N. Y.
- David MacKenzie, principal Central High School, Detroit, Mich.
- William B. Owen, principal Chicago Teachers' College, Chicago, Ill.
- Henry Carr Pearson, Horace Mann School, New York N. Y.
- J. F. Smith, superintendent of schools, Findlay, Ohio.
- F. W. Thomas, principal of high school, Santa Monica, Cal.
- Henry Daniel Wild, Williams College, Williamstown, Mass.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON MODERN LANGUAGES.

A preliminary draft has been submitted to the members of the committee, and in general it has met with their approval. This statement has been made by the chairman with the help of suggestions made by mail by various members of the committee. There are undoubtedly many details in which different members of the committee would suggest changes.

ABSTRACT.

Service to the pupil determines the aims of instruction. Work must at all times be of value both to those who are to leave the class and to those who will continue in it. The aims of the first year are phonetic training, knowledge of the fundamental principles of language, and interest in the foreign nation whose language is studied. Pupils with neither taste nor capacity for studying a foreign language should drop it after the first year. Oral work and accurate

pronunciation should from the beginning receive the most careful attention. The method used depends somewhat on the equipment of the teacher, but it should train ear, eye, tongue, and hand.

The first texts should be of the simplest kind and should arouse an interest in the life of the foreign people. The work may include copying text, with minor variations of person, number, tense, etc.; writing from dictation; reading aloud; translation, oral and written, both from and into the foreign language; reproduction; paraphrasing; imitative and free composition. Texts should be modern in style, not too long, distinctively national in character, adapted to the age, sex, and thought of the pupil, and they should give something worth remembering. Grammar should be the handmaid of the text, which should be the center of all instruction. In translation, thought should intervene between the two languages, being derived from the first and expressed by the second.

In proportion to the time allowed, modern-language instruction in our best schools is as good as that abroad, but we need more good teachers and an opportunity for selected pupils to begin the study of a foreign language under competent instruction in the grades. The colleges should give especial attention to preparing teachers of modern languages, and the cities should grant Sabbatical years with half pay to teachers who will go to the expense of study abroad.

I. AIMS.

Service to the pupil is the great object of the work of this committee. In accordance therewith, valid aims are defined as those which seek to meet the needs of real pupils as we actually find them, and a satisfactory method must give such pupils, in proper sequence and quantity, what they need to receive. We must so arrange the work that at every point it may be profitable for those taking it, giving to all a general appreciation of the subject, attaining for all who continue the language beyond the introductory stage satisfactory power in certain particulars, and securing a useful degree of skill for those by whom such skill may be needed. The first work should be so chosen that those who drop the subject early shall retain something of value for themselves while impeding as little as possible the progress of others who are laying the foundation for future study, and a determining factor in deciding the order of procedure should be the principle that the work that makes for skill not generally needed and difficult of attainment should be reserved for later study and for especially gifted pupils.

Certain features of modern language work may be eliminated at once from the list of reasonable aims for the pupil who expects to drop his language study early, either because he must leave school

or because his individual powers or lack of power make it advantageous for him to use his time in other ways. Such a pupil can expect neither to read nor to speak the language; a mere parrot-like knowledge that a German calls "die Tür," and a Frenchman "la porte," a thing known to the pupil as "the door," is likely to be soon forgotten and to have no value either "practical" or educational. He can not hope to gain either skill or power in most phases of the subject, and for him we must choose work in which the field is so restricted that diligent study for even a short time may secure some satisfactory achievement and in which the training received will extend to other interests and develop the child along lines not directly connected with the language itself. Yet this work must also be profitable for those who expect to go further, and must therefore be a good foundation for future advanced work.

Three aims of modern language instruction seem to meet perfectly these requirements, which at first appear so hard to reconcile. They are:

(1) To secure a reasonable degree of phonetic accuracy and lead the pupil to feel its importance.

For the child, speech has been a more or less unconscious process. With the study of a foreign language he should discover the necessity of making sounds and their formation the object of careful attention. He should gain thereby a conscious control of his speech organs; should develop his power to use them as he wills; should learn to feel the significance of sound distinctions, and to enunciate clearly whenever he speaks. The slovenly mumbling that so often passes for English speech sufficiently emphasizes the need of this.

(2) To teach precision in the use of words and to give a clear understanding of grammatical relations and of the common terms which state them, showing why such terms are necessary.

The child's own language has been so much a part of his very being that it is extremely difficult for him to look upon it as a proper object of study. The normal child feels competent, without any rules, to speak in a perfectly satisfactory way. And if well born and reared he ought to be. To learn to employ the terms of grammar seems to him a most unnecessary and foolish thing. After reading or hearing that John struck James, he gains no further information by being told that John is the subject of the sentence; and he can not conceive of any human being so stupid that he must be told that John is the subject before knowing which boy struck the other. When he knows offhand how words go together, why should he learn strange, odd-sounding terms to explain relations which to him need no explanation? That is the puzzling mystery which very often befogs the boy who "can't understand grammar." He is confused by the attempt to explain to him by mysterious vocables what

seems perfectly clear without any explanation. In the case of a foreign language the child comes easily to see the need and the use of grammar, if from the beginning it is made what it should be, the handmaid of the text.

Vagueness of the thought associated with a word is even more common than faulty enunciation. The study of the foreign language shows the importance of knowing the exact meaning of words and of using them with care.

(3) To stimulate the pupil's interest in the foreign nation, leading him to perceive that the strange sounds are but new ways of communicating thoughts quite like his own; showing him by the close resemblances in words and viewpoints that the German and the Frenchman are his kinsmen, with interests, ambitions, and hopes like his own; revealing to him that their tales can give him pleasure, their wisdom can enlighten him.

For every sort of pupil this work can be made profitable, and in most cases entertaining. Affording an excellent foundation for future study, it is valuable alike for the pupil who drops out early in the course and for him who is to make a specialty of language work. These aims, moreover, do not imply the completion of any definite amount of work before the child can profit by what he learns, nor do they require the application of any particular method. While keeping them constantly in mind, we may stress the substantive with the "natural" and the "picture and object" schools, or we may attack the verb first with the followers of Gouin and the "psychological" method. The same ends may be sought with a class that can rapidly acquire a large vocabulary and attain a considerable command of inflectional forms and with a class of immature beginners whose progress must be slow. The closest application to these aims is compatible with a very great variety in details of method.

The end of the first year should be marked by the elimination of those who are unprepared to continue modern language study in a somewhat serious and determined way. The most moderate achievement in learning a foreign language implies persistent application to tasks not wholly pleasant, alertness of mind and retentiveness of memory, the building of a unified structure, each part of which must rest on previous work well done. In a modern language such achievement must include at least the power to read an ordinary book rapidly, intelligently, and without too frequent recourse to the dictionary. Attainment short of this is practically useless, and the pupil who is not to reach this stage had better drop his French or German at the end of the first year and use his time for other things. In a well-rounded course satisfactory achievement should include also the ability to understand the foreign language when spoken distinctly and the ability to express simple thought orally or in writing. In

general, after the preliminary year, two years of further study will be needed for acceptable results.

In his fourth year of study the high-school pupil is mature enough and should have had experience enough in dealing with abstract notions to profit by a somewhat careful consideration of the fundamental principles of grammar and composition, as illustrated in both the foreign language and his own. Attention may be called to the literary quality of the texts read, and the development of an appreciation of good literature and of a taste therefor is a proper aim of general value.

The texts of the fourth year may be chosen to give particular power in the rapid reading of special material: Commercial texts and business correspondence for the pupil who expects to enter commercial life; scientific French or German for him who expects to go to a technical school. In general, however, the work will be merely a continuation and extension of that of the preceding two years, introducing more difficult texts and more rapid reading; adopting a more scholarly and critical attitude toward questions of grammar and style; making the foreign language largely, perhaps almost entirely, the language of the class; demanding more initiative and a larger independence on the part of the pupil, yet being ever mindful of Goethe's line, "Bedenkt ihr habet weiches Holz zu spalten."

In seeking to attain the special ends for which any subject is peculiarly well adapted, the real teacher will ever bear in mind those general aims that are indispensable in all teaching that is worthy to be called education. Habits of industry, concentration, accurate observation, intelligent discrimination, systematic arrangement and presentation, careful memorizing, independent thinking so far outweigh the advantages gained merely by knowing something about a particular topic that they are perhaps too generally assumed to be universal, and, like the air we breathe or the water we drink, are sometimes forgotten or neglected. The personality of the teacher and the manner in which he works, rather than the subject he teaches or the method he uses, will make for those elements which, after all, are the great objects of secondary education, the business of which is indeed to impart knowledge that is likely to be useful, but far more to develop in the child those tastes, powers, and habits that fit for happy efficient living.

II. METHOD.

Only one reasonable explanation can be given for the persistency of the conflict among different methods of teaching foreign languages. It is that each method which has won any considerable favor has in it elements of good, and has secured results which seemed desirable to those who used the method; indeed, we may perhaps

go further and say that the worst of a dozen methods, employed by a strong teacher with underlying purpose well in mind, will give a more valuable training and better results than any method when employed by an inferior teacher. It is probable, too, that one method is better than another for doing some things but less effective in securing a different end or ends, so that the aim which seems most important will determine the method to use in a particular case. Doubtless, too, the equipment of certain teachers makes it possible for them to work best with a method which a different teacher would not wisely choose. Instead, then, of trying to lay out in detail the "best method," we should consider various methods that have been found good, endeavor to see wherein their merit lies, and to decide what method seems especially well suited to various conditions and to different types of classes or teachers. In the Report of the Committee of Twelve of the Modern Language Association of America (D. C. Heath & Co.), Section III, entitled "A critical review of methods of teaching," has well outlined the chief methods and their characteristic features; and we shall assume that the reader is familiar with that report, which has been the guide and standard of modern-language instruction in the United States. It is thought, however, that improved conditions make it now possible to take a somewhat more advanced position than was advisable in 1898.

Methods may be classified as "direct," which seek to eliminate the mother tongue, endeavoring from the beginning to associate directly the thought and the foreign expression; and "indirect," that base their work on the child's knowledge of his own language and depend largely on preliminary grammatical instruction, translation, and explanation in the vernacular. Few advocates of direct methods are now so extreme as to reject all use of the mother tongue; nor would any good teacher who uses in general an indirect method fail to employ many devices for getting direct association of thought and the foreign speech. The grammatical and the reading methods may be called indirect; the phonetic, which has grown into the "new" or "reform" (often now spoken of as "the direct" method), the Gouin or psychological, and the natural, Henness-Sauveur or Berlitz methods, may be called direct. A hard and fast line could scarcely be drawn, however. Some teachers who begin with a grammatical or a reading method use the foreign language largely in their later work, while many of the best exponents of the reform or of the Gouin methods do not hesitate to employ the mother tongue freely at first in stimulating the pupil to the thought desired.

As aims suitable for the first year we have mentioned phonetic accuracy, grammatical comprehension, and interest in the foreign nation. To secure the first a very large amount of oral drill is essential. It is necessary, moreover, that this drill aim at accuracy and

not at the slipshod approximations that make the results of some attempts to use a direct method as unsatisfactory from a phonetic as from a grammatical standpoint. As pupils grow older and their imitative faculties become less acute, more attention must be given to the vocal organs and to the theory of sound formation; the relations of sounds and the distinctions between them must be more carefully explained, and a larger amount of phonetic drill is required. Neglect of this is fatal. The unfortunates who are allowed to become fluent in ill-pronounced French or German never recover; their sound perceptions are blurred, instead of being educated; the only compensation is that they themselves are mercifully unconscious of the suffering which their vocal atrocities inflict upon others. The man trained by the grammatical method usually knows that he can not pronounce, and so does not attempt it; the badly trained victim of a superficial conversational method flays complacently the unhappy language. A teacher who can not pronounce well but is, unfortunately, compelled to teach does less harm, therefore, by omitting pronunciation as completely as possible than by teaching a pronunciation that is a bad habit likely to persist. Good teaching, however, implies a well-equipped teacher, and a good pronunciation is fundamental.

The care with which pronunciation is taught should extend to the English as well as to the French or German; the immediate result of the work will be well-spoken French or German, but the educational value in a wider sense should be an appreciation of the beauty of clearly enunciated, distinct speech in general, the habit of noticing sounds and inflections, and a desire to speak well.

For teaching pronunciation, some prefer phonetic texts, but a majority of our best teachers do not feel this to be necessary. Some would use them for French, but not for German or Spanish. Nothing like a course in phonetics should be attempted in teaching a foreign language in a high school, but, where mere imitation fails, a teacher with phonetic training can at times give briefly helpful directions for making certain sounds and for appreciating sound distinctions. There should be much distinct speaking by the teacher; repetition in unison and singly by the pupils; unwearying drill until the sounds are right and the swing of the word group well imitated. Most important are the vowels; consonants are more easily acquired. Separate sounds, syllables, words, and phrases must all be practiced. In time the foreign idiom should become the usual language of the class, and even seem a natural means of communication between teacher and pupil outside the class.

With the aim of accurate pronunciation always in mind, the particular material treated is relatively unimportant. As speedily and completely as possible, thought and sound should be directly joined, but whether the stimulus to the thought should be primarily an

object, a gesture, a picture, or a book, is a question that may well be left to the discretion of the teacher. The best practice is probably to employ, as far as time allows, every available means, separately and in combination, to impress permanently and together thought and sound, written sign and muscular movement. Ear and eye, tongue and hand, should be in constant interaction with the busy brain, each exciting and aiding the others. Undoubtedly a normal spelling makes for a wrong pronunciation no less in the foreign language than in our own, but until men adopt everywhere a phonetic alphabet and spelling we shall be obliged to associate words as sounded with their signs as normally printed or written, and it is a fair question when this association should begin. In teaching a foreign language, the sound should certainly come first; it should be practiced and repeated in connection with the thought until it is likely to be remembered, and then only is it safe to associate the word with the conventional spelling.

Whatever be the method employed, grammatical comprehension is demanded as soon as the words are grouped so as to express real thought. Fundamental concepts of action and actor, subject and object of a verb, adjectival and adverbial modifiers, the connectives of speech, various modes and times of action, etc., must be brought out with a clearness that in a child's mind is often absent, dormant, or vague in connection with the mother tongue. That inflectional forms are often necessary to express these varying concepts is not infrequently a discovery for the pupil, and the fact should give the concepts greater definiteness and importance in his mind. In the real education of the boy, clarifying and classifying these concepts and getting him to regard language objectively and to appreciate to some extent its mechanism, is far more important than the mere acquisition of a foreign tongue. So from the beginning sentence structure should be so presented that the elements of the word group stand out in their proper relations and that the inflectional forms carry with them a comprehension of those relations. Whatever be the method, the word groups presented should be simple enough to insure correct understanding of grammatical relations (syntax), progress should be sufficiently slow for the pupil to fix one form before others are introduced, and abundant swift illustrations, chiefly oral, each as short as possible, should spike together correct pronunciation and correct feeling for inflectional forms. Here, too, effective work must at the same time build a firm foundation for the new language and develop an appreciation of general speech-truths that will make the course profitable for him who drops out of the class as well as for him who continues therein. In arithmetic abstruse problems have no proper place with beginners; so, in language study, simple sentences with limited vocabulary and frequent repetitions

should furnish the material for the first year. Long, complicated sentences, like puzzle problems, are an entertaining and perhaps profitable exercise for those who have a taste for them, but it is certain that we rarely have to deal with such problems, and if a pupil is not naturally clever in solving them, forcing him to attempt them involves a most unprofitable expenditure of time and energy.

Among general truths of language the importance of word order and the great significance of the pause, with its effect on what immediately precedes or follows, need to be especially studied by the pupil and in some cases, perhaps, pondered long and carefully by the teacher.

III. MATERIAL.

There exists a very wide difference of opinion as to the choice of material to be used with beginners. Aside from classes that for the first year study the grammar only—may their number ever grow less—the texts used may be roughly classified as—

- (1) Conversation manuals, based on daily life, foreign travel, etc.
- (2) Selections from historical or scientific readings, regarded as having intrinsic value.
- (3) Fiction, fairy tales, etc., regarded as having little intrinsic value, but suited to interest and attract the pupil.
- (4) Texts of literary reputation, as *Télémaque*.

However varying tastes and circumstances may influence the decision among these groups, it is reasonable to assume that the nation whose history, literature, or commercial importance makes its language worth studying should have elements of interest for every intelligent person, and that arousing this interest must play an important part both in opening a field of wholesome enjoyment and in stimulating a desire to continue the subject gladly and diligently. Since beginners can not be expected to have enough comprehension of a new language to appreciate literary style, and since high-school freshmen ought not to have had experiences that fit them really to feel great literature, most texts of literary reputation should be absolutely eliminated from first-year work. In choosing from the other three groups, phonetic and grammatical ends seem to be as well served by one as by another. The choice may therefore depend on our third aim—arousing an interest in the foreign nation. For this aim, scientific reading must be of the simplest type, dealing with such topics as the geography or the inventions of the nation; historical selections must be equally simple and should deal with the popular features of the nation's history; and with most pupils this material can be used only sparingly without loss of interest. Some pupils look with scorn upon the fairy tale as beneath their dignity. This attitude is often merely a pose, and the folk tale especially has qualities of human interest

that, when set off by local color, rarely fail to attract old as well as young readers. Fiction exclusively, however, is apt to create an impression that the work is not of a serious nature.

There remains the field of *realien*, real things about the actual life of the people, and it is probably wise to draw upon this source for most of the material for the first year, as it combines the advantages of general interest with a feeling that what is read is of a real and substantial nature. An ideal text for the first year might then be described as one that, constantly employing the simplest expressions and constructions, gives attractive glimpses of the common life and scenes in the foreign land, with bits of its history, natural features, inventions, and folklore. The "guidebook" type must, however, be avoided as uninteresting to the large number of our pupils who expect never to travel abroad.

IV. DETAILS OF PROCEDURE.

Having agreed that our first aims should be phonetic training, grammatical comprehension, and interest in the foreign nation, and that our text should treat largely of the life of the people and be of the simplest type, we come next to the question of details in the treatment of this material. Experience indicates that in this respect no universal agreement can be secured, but certain general principles of procedure may be suggested and certain dangers of common practice may be pointed out.

First, the time devoted at the beginning to learning accurately the sounds of the new language is usually quite insufficient. It would be advantageous if an arrangement could be made by which for several weeks no home study would be assigned in a foreign language, allowing teachers of other subjects to utilize that time in exchange for classroom time. In this way all work done in the new language might be done in class and under the direction of the teacher. If home lessons must be assigned during those first few weeks, they should be such as to involve the least possible danger of fixing wrong speech habits. The use of phonetic script probably makes it possible to assign home work with less danger of associating wrong sounds with the normal spelling. If it is not thought wise to use the phonetic script, keep the vocabulary small, repeat the same words again and again with all the variety of simple real uses that the ingenuity of the teacher can discover; let home work include nothing that has not been exhaustively worked over in class. Much copying of text and writing out at home the most useful inflections of a very large number of words will fill up the time out of class that some teachers feel obliged to demand lest pupils get at first the unfortunate impression that the new study is a "cinch." This copying of text,

varied as soon as possible by changes of person, number, tense, etc., is a good introduction to the writing from dictation which should be soon begun and diligently practiced.

Many fierce battles have been waged over the question of translation. It is probable that translation can not possibly be avoided in the earlier stages of study. A child can not see a familiar object without having the name by which he has known it flash instantly into his mind. A thought is bound to seek expression in the language with which similar thoughts have been most closely associated, and once formulated in this language, subsequent expressions of that thought will be more or less a translation. As it is always best to face facts as they are and to reckon with them, no matter how displeasing they may be, the wise procedure here is probably to attack translation early and try to teach pupils how a translation ought to be made, passing from one language to thought, and from the thought to its expression in the second language. Left to himself, a pupil will certainly translate, and he is equally certain to do it wrongly, substituting English words for those of the text, and then guessing the meaning from the English (?) result. The two languages are the two slices of bread in a linguistic sandwich, and they should always be separated by a filling of meaty thought, so that the words of each language are in direct contact with the thought and not with each other. This insistence on joining thought and sound should apply as well to all use of the mother tongue, and failure in this respect accounts for many of the stupid utterances so common in our classrooms.

Using a vocabulary should mean more than merely finding an English substitute for the foreign word. The second and most important part of the process is visualizing or otherwise securing a clear and definite concept of what is meant, then associating permanently this concept, and not the English word with the foreign word. If this association of concept and foreign word can be secured as swiftly and certainly without the intervention of English, the English, of course, is superfluous; but, if English is the quickest and most convenient means of securing this association, there seems to be no valid reason for depriving ourselves of its aid. Only, with or without English, we must not fail to attain as our result a direct and accurate association of thought and the foreign word.

Here the Gouin-Bétis or psychological method differs widely from the extreme types of "natural" methods, which, in the attempt to create an atmosphere of foreign thought, rigorously exclude all English. In teaching "pendule," for instance, Bétis did not show the pupils a clock, neither was he satisfied with merely saying "clock," but he cleverly used English to lead the class to visualize various types of clock known as "pendule," and left them with a clear and

abiding knowledge of the word. So, in a class of beginners, Walter, who has adopted many of Gouin's suggestions, uses the mother tongue freely in associating clear and correct concepts with the new word he is teaching. If then we finally get the direct association which we desire, we see that the question whether English is or is not excluded becomes an unessential detail of procedure and is largely a matter of economy of time. When the pupil's equipment fits him to understand an explanation in French as well as one in English, use the French, for with equal thought content an hour of French alone is better practice in learning French than an hour half French and half English.

Reference to the Gouin and the natural methods suggests another wide difference between them, in which the truth lies with neither extreme. For Gouin, the verb and the verb series are the soul of speech; for the natural methods, all revolves about the substantive, the tangible thing, that can be seen and shown in connection with the new word presented. In truth, verb and noun must go hand in hand, for an actor without action is as sterile as an action without an actor is unthinkable. In any concrete example word order and the construction of the sentence will show which is the more important in the mind of the speaker and which must be emphasized as the better key to his meaning.

Among other processes that are commonly employed we may mention grammatical study, reading aloud, writing from dictation, conversation, translation from and into the foreign language (version and theme), reproduction orally or in writing, paraphrasing, composition based on the text, and free composition. It is not intended to say what processes should be used or how they should be combined by any teacher, but the following suggestions are offered for making as effective as possible whatever work the teacher may decide to undertake.

Grammar can be regarded as an end by the philologist only. For all pupils in a secondary school it must be the handmaid of the text and must be regarded as existing solely in order to make clearer the language which it serves. The need of a rule and its application should be apparent to the pupil before he is required to learn the rule; words should be seen in use with a context before they are classified and memorized; the force of an inflection should be made plain from its use in a word group before the pupil is asked to inflect the paradigm; and in the unceasing repetition necessary to fix inflectional forms care should be taken that they are never parrot like repetitions, devoid of thought. Make the text the center of all instruction; base upon it grammar, conversation, and composition; and the grammatical knowledge derived from the text as a model will be applied intelligently in written and oral expression.

Reading aloud—now too much neglected in the mother tongue—should be a favorite exercise. With large classes no drill is so effective in teaching pronunciation as reading in unison after the teacher. In later work intelligent reading aloud is helpful in fixing the foreign language in the memory; it may take the place of translation where the simple character of the text and the manner of reading give sufficient evidence that the meaning is clear; and the practice is enjoyable and useful to those who form the habit of reading aloud in their own study.

Writing from dictation has always been much employed in French schools for French children learning their own language, and it is much to be commended. While less difficult than reproduction or paraphrasing, it is an admirable test of the care with which a passage has been studied, and the dictation of unseen passages is an excellent criterion of the pupil's ability to understand the spoken language. Dictation may begin early in the course, and until the very end it will be found useful both as a test and as training.

Conversation has been alternately praised and condemned. Some regard it as enlivening, stimulating, and instructive—the most enjoyable and profitable of all exercises. To others it is futile, inane, productive of no valuable results, and terribly wasteful of time. It seems clear that not all teachers and not all classes can use conversation to good advantage in high-school work. The teacher must be inspiring and perfectly at home in the language; the class must be alert, responsive, and homogeneous; the work must be systematically planned and followed out swiftly and directly to a definite end. Otherwise the time can be spent better in other ways. With large classes the necessary conditions rarely obtain, and unfortunately most high-school classes are too large for the best work. Although conversation as a formal class exercise is apt to be a failure, there is no class in which a competent teacher will not find many opportunities to converse easily in the foreign language, now giving a simple explanation, now asking a question and getting an easy answer, all so naturally that no one seems aware that the foreign language is used. The more of this the better. Conversation of this kind is the straight road to effective possession of a language; neither strained nor forced, it is good work.

Translation, too, has its warm friends and its bitter enemies. Reformers have worked as hard to drive it out of the class as they have done to drag conversation in; but theme and version are still neither dead nor moribund, and there is no prospect that an exercise which has maintained itself since the beginning of language study is going to vanish in the next generation or two. The difficulty is that the meat in the sandwich has a tendency to drop out and leave only the bare bread—*voces et inter eas nihil*—in other words, that translation comes

to be a mechanical substitution of the words of one language for the words of another, with little or no thought in the process, while translation ought to mean the study of a passage until its thought is clearly apprehended, and then an effort to put that exact thought into the other language with all the force and beauty that our command of the second language makes possible. This, of course, is translation of the ideal sort, but it is the kind of translation at which all translation should aim, and the only kind which will contribute effectively to a command of the foreign language and an appreciation of its qualities. With the other more common kind of translation the pupil never reads French and German, but only the shabby English into which he has more or less correctly paraphrased the original; he never writes real French or German, but only English with a foreign vocabulary. Such translation is rightly condemned as vicious and demoralizing, a veritable hindrance to the learner; but only the most vigorous and persistent efforts will keep the beginner from translating in just that way. Among helpful devices for preventing it we suggest oral translation of sentences heard but not seen, the translation, with book closed, of a sentence that the pupil has just read, or other ways for avoiding the *mot à mot* and securing a grasp of the word group as a whole with a complete meaning.

“What do you mean?” “So and so.” “Then say that!” will sometimes get a real translation instead of the monstrosity that has been first offered by the pupil.

Underlying all the discussion for and against translation is the inevitable fact that not one student in a thousand can expect to gain such control of a second language that he can frame his thought in it as quickly and effectively as in his own; hence, whenever a thing is to him real and important, he will think it through first in the vernacular, after which any expression of the thought in a second language can not fail to be more or less consciously and directly a translation. The foreign correspondent must translate when he communicates the information received from abroad; he must translate when he writes in a foreign language the instructions received in English from his employer; the engineer, the lawyer, the physician, the scientist, the philosopher, the author must all translate when they proceed to use in their business the information gleaned from foreign sources. Even the teacher must translate when he tells his associates what our colleagues in France or Germany say of the direct methods. The practical thing, then, is to train the pupil to translate as he ought, and to depend for his expression in the new language, not on dictionary substitutes, but on the treasure of foreign words and expressions which he has acquired and learned to associate with their correct meaning. And the time to teach him this, which

is no easy thing to learn, is while he is learning the language, for practice in doing it must be long and careful if it is to be successful.

In the give and take of conversation the rapidity of the process often excludes translation, but there are comparatively few who will ever converse enjoyably in a foreign tongue, and the long practice which is an essential condition will usually bring with it the power.

To read and understand a foreign language without translation is much easier than to speak or write in it. Until, however, one can give in his own language a swift and accurate rendering of what he has read there is good reason to doubt whether he has understood clearly and completely or whether he has been satisfied with the vague sort of semicomprehension which, if unchallenged, sometimes passes for understanding when our pupils read the mother tongue. Inability to translate rapidly and well must imply either failure to understand clearly what has been read or else a poor command of English. If the latter, the American boy or girl needs nothing so much as just the kind of training in English which this translation affords; if the former, we need to try the pupil by the test which most swiftly and certainly reveals the weakness. Hence translation of the right sort, both from and into the foreign language, must not be omitted from high-school courses.

On the other hand the student must be trained to get thought directly from the original, and instruction in the foreign language is not intended primarily as instruction in English. So the wise teacher will give but a portion of his time to translation, and he will avoid too great use of spoken English by having a considerable part of the translation which he deems necessary written rather than oral.

The only safe use of a foreign language is that which imitates the expressions of scholarly natives. Hence all work of the learner must be based on good models and the stages of imitation seem to be: Exact reproduction; paraphrasing, with variations of persons, number, tense, etc., and substitution of other suitable words for those of the text; free reproduction or composition based on the text and closely following it; and free composition. The last is the highest and most difficult achievement, and it can not wisely be attempted until the learner has had ample experience with the forms of expression which the native uses in similar composition. Some excellent teachers refuse to attempt it before the fourth year of the course. Premature attempts at free composition are as bad for style as premature chattering is bad for good pronunciation. Both result in fixing wrong notions and bad habits which are very hard to overcome. It is better policy to make haste slowly and to be sure that the proper foundation is laid before we try to build upon it.

How far may we reasonably expect to go in the second and third years of study? Much will depend on how successful we are in over-

coming the aversion of parents and school boards to the elimination of the incompetent at the end of the first year, and this must be done on the ground that for those whom we seek to eliminate further study of the foreign language is less profitable than the same time spent studying something in which they can get better results. If modern-language classes can thus be restricted to those who show a reasonable fondness and aptitude for the study, by the end of the third year the work accomplished should be about as set forth for the intermediate course in the Report of the Committee of Twelve. It is probable that most teachers will prefer to read in class a somewhat smaller number of pages than is there suggested. There is a strong belief that a small amount thoroughly prepared and carefully studied leaves a larger permanent possession than is retained from reading hastily several pages, and some would reduce the amount required to one-half that specified by the committee of twelve. Others fear that asking a smaller amount will mean more dawdling, less work, and the same poor quality with only half the quantity. The solution seems to be a reasonable amount of honest work, at times so concentrated as to permanently impress essentials and at other times so distributed as to stimulate alertness, develop the power of swift vision and rapid judgment, and give opportunity for a fairly wide range of style and vocabulary. In either type of lesson the teacher must have a clear notion of just what he is working for and he must devote himself to getting it. The Report of the Committee of Twelve appeared about 15 years ago, and the improvement in the equipment of teachers and in the methods commonly employed at present should make it possible to insist more strongly upon the oral side of the instruction. If this is effectively done, the greater thoroughness of the treatment in class should more than compensate for a reduced number of pages read.

For the fourth year we may add to our general aims such special work in scientific or commercial subjects as may be required by particular schools. As to the amount of work, it is probable that the advanced courses outlined in the Report of the Committee of Twelve are rather more than can be expected of even the best high schools in a four years' course.

In the fourth year the foreign language will be generally used in class, and good pupils should develop considerable facility of correct expression. Nevertheless, in French, for instance, we, with our maximum of four years' (20 hours') study, can not hope for results equal to those attained by a German oberrealschule with nine years (47 hours) or of a realgymnasium, with seven years (29 hours) backed by nine years of Latin. To-day the work of our best schools is at least as good as the comparison of time allowances would lead us to expect; and if we compare the probable utility of a foreign language

to the average American boy with its usefulness to his French or German cousin, his ratio of efficiency would doubtless be greater than his ratio of need. That, however, is no answer to the demand that an American pupil who wishes good instruction in a foreign language should be able to have as complete a course and do as good work as the French or German pupil. The committee believes, however, that this increased efficiency can not come through an increased time allowance in the present high-school years; nor can more be expected than our best teachers are now doing with the time and material at their disposal. Improvement must be sought first, from an increase in the number of well-equipped and efficient teachers, and, second, from an extension of the years of modern language study downward to the age of 10, at which time the boy abroad has begun it.

V. TEACHERS AND TEXTS.

If the American public is about to insist on better work in the field of modern languages, it must recognize that the first essential is a body of well-prepared teachers and that the training of such teachers is long and expensive, including foreign residence of at least a year in addition to the usual equipment of an American teacher. Unless the schools will pay a teacher of French or German enough more than they pay a teacher of English or science or history or mathematics to cover this initial expense, the colleges must so plan the modern-language work for those who intend to teach that the youth on graduating may be as competent to teach French or German as he is to teach the other subjects. Perhaps he is so already; but while neither he nor his pupils are likely to be tested by the man in the street as to his knowledge of Latin or physics or algebra, in this cosmopolitan age he can not turn a corner, enter a hotel or a street car without facing some well-informed and pitiless critic who knows at once that his speech is not that of Paris or Berlin. The critic may, indeed, be a cook or a fiddler, but he hears with scorn our poor instructor's attempts to speak French or German and is not reluctant to express his derision. Nor will it do to hire the cook or the fiddler to teach for us, for they have already shown too often that they can not meet the other requirements of our high schools. We must have a large number of American-born teachers who know the foreign language too well to be ridiculous when they attempt to speak it. As school boards are likely to insist that a teacher is merely a teacher, worth so many dollars a year, without reference to what he teaches or what it cost to learn it, the colleges seem bound to face the problem of meeting the demand for young people better fitted to teach French, German, or Spanish. But just how they are to do this is a problem for the colleges and not for this committee.

Section V of the Report of the Committee of Twelve deals with the study of modern languages in the grades below the high school. We are in complete accord with the conclusions of that report that the study of a foreign language in the grades should be optional, restricted to those who will probably continue it, and allowed only in small classes, with a daily lesson, and with a competent teacher. But here we meet the obstacles of precedent, which says that it has not been done that way hitherto; of routine, which pleads that such special arrangements would involve great trouble and inconvenience to the schools; and of expense, which asserts that such teachers are hard to find, prefer high-school service, and could not be kept without a salary larger than that paid to most other teachers in the same school. Possibly we might add to these, administrative inability to understand the situation and grapple with it successfully; for it is the task of an expert, and few school boards or school superintendents are modern language experts.

Here, too, we find ourselves in the vicious circle of insufficient teachers, due to insufficient college training, due to insufficient material, due to insufficient teachers, and so on round again. The only way to break into such a circle is to break into it wherever we strike it; to demand that the cities at once get some good modern language work done in the grades, and pay a reasonable price for it; that the colleges at once give especial attention to training more competent teachers of modern languages; and that ill-equipped teachers get to work in summer schools or take a Sabbatical year abroad, the cities sharing this burden by granting them half pay on reasonable conditions.

If many important points of modern language work are not considered in this statement, it is because the Report of the Committee of Twelve, made 15 years ago, was so scholarly and so comprehensive that it would be a work of supererogation to repeat, and evidence of presumption to attempt to improve most that was said in that report. It is sufficient to call attention to certain lines along which further constructive suggestions seemed likely to be useful.

It has been stated that conditions have so changed in the past 15 years that a list of desirable texts ought to be published now, but the experience of the German teachers some years ago in publishing a "kanon" of French and English school texts showed the efficient performance of so great a work to be far beyond the resources of this committee; and with the many sources of information now available, it seemed best to mention no specific texts. We venture only to suggest that in choosing a text for any particular class, one should consider—

The date of the text. For school work modern texts are almost always preferable.

Its length. Long texts grow monotonous and give too little variety of style and vocabulary.

Its national quality. It should be a distinctive product of the race it depicts.

Its adaptation to the age, sex, and thought of the pupil.

Its informational content. Without being dull it should give something worth remembering.

WILLIAM B. SNOW, *Chairman.*

ENGLISH HIGH SCHOOL,
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The other members of the committee on modern languages are as follows:

J. F. Broussard, University of Louisiana, Baton Rouge, La.

William H. Clifford, East Side High School, Denver, Colo.

Annie D. Dunster, William Penn High School, Philadelphia, Pa.

Charles H. Handschin, professor of German, Miami University, Oxford, Ohio.

Joel Hathaway, High School of Commerce, Boston, Mass.

Frederick S. Hemry, Tome School, Port Deposit, Md.

Carl F. Krause, Jamaica High School, Jamaica, N. Y.

Alexis F. Lange, dean of the College of Faculties, University of California, Berkeley, Cal.

Edward Manley, Englewood High School, Chicago, Ill.

Alfred Nonnez, Walnut Hills High School, Cincinnati, Ohio.

William R. Price, State department of education, Albany, N. Y.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON HOUSEHOLD ARTS.

It is the purpose of the group of courses offered under household arts to prepare girls not only to become better homemakers, but to make them more intelligent concerning those occupations which were formerly a part of every home but have recently been taken from the home, and to give them an appreciation of the factors that make up the municipal environment, and of the influence of these on the home. The immediate aim of such work is to give the girl an understanding of the responsibility and function of the homemaker through a knowledge of the elementary principles of biology, chemistry, physics, and bacteriology as applied to food preservation and preparation and to the conservation of the health of the family. Laboratory work should be given so that the girls may acquire skill in cooking, making clothes and household equipment, planning houses, and also some experience in purchasing household supplies and equipment.

Because the larger proportion of our girls in the public schools never enter the high school, work in household arts should be begun in the grades; many elementary schools are already offering work in "sewing" and "cooking."

Under "sewing," girls in the grades learn the technique of the various stitches and of making simple garments, cut either from drafted or commercial patterns. In the high school, under "clothing," an opportunity should be given to review the work of the grades, but advanced work should be given and a broader aspect of the subject presented; the sociological, economic, and historical phases of the work should be emphasized, more complicated patterns should be made, and the principles of art and design should be considered in relation to dress and household furnishings. The advanced courses may include the history of costume, the care and cleaning of personal and household linen, and a study of the various adulterants used in fabrics of different kinds. Those girls who enter the high school with the technique of sewing already learned have a distinct advantage over those who must master this during their high-school course. It is obvious, therefore, that either we must plan two courses for high schools or we must offer a preparatory course in sewing which shall be comparable to that given in the elementary schools.

A similar problem confronts us in food work. Some school systems give one, others two years of cooking in the grades. In these classes the girls learn the processes of food preparation, the composition of the various foods, and in a general way the functions of the food principles in the body. To ask the girl to repeat this in her high-school course would be futile, and yet the high-school girl must have this elementary course before advanced work can be taken. Obviously, both groups of girls, those who enter with no preparation and those who enter with either one or two years of preparation, can not be put into the same classes, nor can they cover the same ground during their high-school course. Therefore, in the food work, as well as in the sewing work, two courses must be planned or else a non-credit course preparatory to the high-school work must be given.

The work in the grades in both cooking and sewing is given largely from the standpoint of manual training—that is, the emphasis is on manipulation; the how, rather than the why, is stressed. In the high school the emphasis should be on the reasons for doing things, and the food work should be given largely from the point of view of applied science; and, in order that the girls may have some science to apply, it is desirable that a course in general science should precede the work in foods or be taken parallel with it. For this reason it seems better to put this course (foods) in the second year of the high school. This leaves an opportunity for those girls who have had no work before entering to take a preliminary course during their first year. Similarly a preparatory course in sewing might be offered during this year.

Our suggested course in household arts consists of five units of work; one in cooking and sewing planned for the grades, and the remaining units for the high school. We believe that the time is not far distant when courses in cooking and sewing will form an integral part of every elementary school system, so that we feel justified in working out the courses on this basis; but until school systems have introduced this work, the preparatory courses suggested should be offered in the high school. No high-school credit, however, should be allowed for these, for the committee is opposed to giving high-school credit for courses which consist largely of mere manipulation.

In the high school one unit of work is planned for each year. During the first two years the work should consist of one unit of textiles and clothing and one unit of foods. Each of these courses may be taken for one year or they may be continued throughout the two years. It is often desirable that the work in clothing be taken in two years, whereas the work in foods may very well be given during the second year, thus affording opportunity for science work during the first year. However, those school systems which are unable to engage a specially trained teacher for this work may find it an advantage to have both courses continue over the two years, for by this means adjoining towns could employ one teacher to take charge of this work in several schools. Neither of these courses should be dependent upon other courses in the high school, although courses in art and science taken previously or parallel should materially enrich them, and the principles learned there should be applied in the household-arts courses.

The following topics are suggested for the work of these first two years. Laboratory work should be given in both cases, but for our present purpose it will suffice to list merely the subjects to be considered.

Textiles and clothing: History of clothing; hygiene of clothing; a study of cotton and linen fabrics, including manufacture, weaving, dyeing, bleaching, printing, mercerizing; laboratory work for identification of fabrics; fundamental principles of garment making applied to underwear and waists; drafting patterns; comparison of homemade garments with factory made at same cost; comparison of cost of homemade article with shop article of same value; sweatshops; consumers' league.

Foods: Canning and preserving fruit, involving a brief study of bacteria yeasts, and molds; a comparison of home-canned fruit with that in the market as to quality, cost, and labor involved; the composition of fruits, leading to a study of food principles; separation of the food principles from some common foods; simple chemical and physical tests for each; a study of protein, carbohydrates, and fats, with the effect of heat upon them and ways of cooking them;

a study of meats and vegetables, with ways of preparing and combining them; the cost of food in relation to its composition; different functions of food in the body; the amount of food required by the body; the comparative nutritive value of some common foods; pure-food laws and their effect upon the adulteration of food; laboratory work involving all the common processes of cooking, with the preparation and serving of simple meals.

The work of the junior year may consist of a half-unit course in textiles—dressmaking and millinery—and a half-unit in house planning, house decoration and furnishing, and sanitation. The work of the senior year may consist of a half-unit course in textiles and a half-unit course in dietetics. The textile course in the senior year should include a study of the composition of the different fibers, detection of the usual adulterants used with them, the principles involved in the various laundering processes, and costume design. Designing and making the graduation dress may well be included. The course in dietetics should consist of a more extensive study of the nutritive value of foods than that given in the first course; methods of detecting food adulterants; the dietetic needs of the body at different ages and under different conditions; the preparation of balanced meals for definite costs; consideration of the factors affecting the cost of living; and the distribution of different incomes for family budgets.

In planning the work of the advanced courses (junior and senior) we are supposing work in art and science which should be taken during the sophomore and junior years, for a knowledge of the fundamental principles of proportion, projection, color, physics, chemistry, and biology is necessary. We hope that the committees that are outlining the work in those subjects will remember that the larger number of pupils in those courses are girls and that their interests are as worthy of consideration as those of the boys. Direct correlations should be made between the household arts and the fine arts on the one hand and between the household arts and science on the other.

We do not advise that all girls should necessarily take the five units of work outlined, but we do believe that at least the first three units should be required; the last two units may be elective. We make this reservation because the girl whose interests lie in other directions—in the classics, in commercial work, or who must fulfill our present college entrance requirements—can not take all the work outlined and the prerequisite courses in art and science. Although our committee is not particularly interested in meeting the college entrance requirements, nevertheless we recognize the fact that requirements do exist which make it impossible for a girl to take more than the most elementary courses in household arts and at the same time complete the prescribed courses; and we must reckon with them,

as a larger and larger proportion of the girls who complete the high-school work are going to college. When our committee shall have completed its work and shall have shown that, from the standpoint of thought content and disciplinary value, work in household arts is as valuable as Latin, Greek, or mathematics, then perhaps entrance credit will be granted in eastern women's colleges (none of which now grant such credit), and the girls will then be able to take a larger proportion of work that shall prepare them for that sphere in life that most of them are destined to fill. Those who go no further than the high school, those who wish to specialize in household arts, and those who are planning to take up a quite different subject afterwards are advised to take the five units.

Only in a general way have we outlined the courses in household arts. During the next few years it shall be the duty of the committee to make these more detailed and to indicate how other subjects in the curriculum may be correlated with them. The preparation of a bibliography should also form a part of the work of the committee.

AMY LOUISE DANIELS, *Chairman.*

UNIVERSITY OF MISSOURI, *Columbia, Mo.*

The other members of the committee on household arts are as follows:

Sarah Louise Arnold, dean of Simmons College, Boston, Mass.

Josephine Berry, State Agricultural College, Pullman, Wash.

Mrs. Henrietta Calvin, Oregon State Agricultural College, Corvallis, Oreg.

Nellie Crooks, Milwaukee-Downer College, Milwaukee, Wis.

Edna Day, department of home economics, University of Kansas, Lawrence, Kans.

Lilla Frick, supervisor of domestic science, Minneapolis, Minn.

Charlotte Greer, Technical High School, Cleveland, Ohio.

Elizabeth L. Kelly, State supervisor of home economics, Baton Rouge, La.

Helen Kinne, Teachers College, Columbia University, New York, N. Y.

Abby L. Marlatt, home economics department, University of Wisconsin, Madison, Wis.

Elizabeth Matthews, University of Wisconsin, Madison, Wis.

Helena Pincomb, University of Illinois, Urbana, Ill.

Jennie Snow, Chicago Normal School, Chicago, Ill.

Mary Snow, supervisor of domestic science, public schools, Chicago, Ill.

Florence Willard, Washington Irving High School, New York, N. Y.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON MANUAL ARTS.

Since the appointment of the committee on manual arts, its most important work has been to reach general agreement as to the most fruitful subjects for investigation and report. From the correspondence and from a conference of a majority of the members held early

in May, it has become clear that questions relating to the place of manual arts in secondary education are inextricably interwoven with those concerning the place of the secondary school in the general plan of public education. That the function of the secondary school is in process of rapid evolution is apparent, and the relation of manual arts instruction to this new secondary school which is in the making is not altogether easy to determine.

This committee finds itself in substantial agreement with the views expressed at the general conference of members of the various committees held in Philadelphia in 1913. It believes that all high-school subjects should be given with a much clearer conception of the provisional destination of the pupil, or at least with a fuller knowledge of his educational program, with a consequent increase in definiteness of purpose. It is held that the discovery of aptitudes is a legitimate and important aim for a certain group of pupils. Especially does the committee feel that a clearly stated differentiation of purpose is not only the highest expression of democracy in education, but that it is essential to the very existence of the public-school system, assuring as it will the constant and ever-increasing interest of the public in things educational.

Instruction in any of the manual arts, therefore, in the opinion of this committee, if given for a purpose which is reasonable and clearly stated, will be as necessary a part of secondary education and will be as fully and freely recognized as such as any other subject in the curriculum, no matter how strongly buttressed by tradition that subject may be. Conversely any course in manual arts which is offered without a clearly defined and simply stated purpose is held to be intolerable.

Furthermore, if regard is to be had to the "destination" of the pupil, numerous questions at once arise as to the possibility of adjusting school work to what is to be encountered at the end of the course. In the past the chief questions of articulation have been those which concerned jointly the high school and the college, but to-day direct articulation is made also with vocational life. Thus vocational guidance and training are coming to be of prime importance to the great majority of high-school pupils, and consequently factors to be taken into account in any solution of the problems before the committee.

The committee has been practically unanimous in its determination to urge upon the general conference the consideration of a revised basis for admitting pupils to the secondary school. Teachers of manual arts were perhaps among the first to observe that over-age children in the upper grammar grades were not necessarily deficient in intelligence, but, rather, were different in certain important characteristics from those whom we have chosen to term their more for-

tunate fellows. Such teachers have frequently insisted that it was a mistake not to care for children of this type in the secondary school instead of holding them back among children of less mature interests and ambitions. The committee will, therefore, seek to bring about a different basis of admission to secondary schools. While not suggesting that this standard be adopted for all subjects taught in the high school, it insists that courses in manual arts should be open to certain children on the ground that they have the ability to do the work of these courses acceptably.

Following the plan suggested at the conference at Philadelphia, this committee submits its preliminary report under the following heads: (1) Tentative conclusions. (2) Problems for discussion. (3) Experiments to be made.

The committee agrees unanimously to the following:

TENTATIVE CONCLUSIONS.

1. The major purpose of instruction in manual arts is to contribute directly to the vocational efficiency of the pupils. 2. There should be developed shorter courses with longer school days and a longer school year and with specific vocational purposes. Short vocational courses should be made available for pupils of secondary-school age who can profit measurably by the instruction given, even when such pupils have not fulfilled all the requirements for graduation from the elementary school. 3. There must be an earlier opportunity for differentiation of purposes, courses, and methods.

PROBLEMS FOR DISCUSSION.

1. Is college preparation one of the legitimate aims of manual-arts instruction? 2. To what extent can general manual-arts courses be utilized as a basis for differentiated vocational courses? 3. What are the more important qualifications for teachers in vocational courses?

EXPERIMENTS TO BE MADE.

1. To determine the characteristics of 14 to 16 year old boys and girls who leave school on or soon after the completion of the compulsory school period. 2. To discover methods of interesting each of the several types in self-improvement.

In addition to the above, the committee has under consideration by different members such questions as the following: (1) By what means or in what terms can courses of study in manual arts be adequately expressed? (2) What constitutes a satisfactory training for teaching vocational courses, and in what way may it be gained? (3) What advantages may lie in checking and in giving school credit for

home industrial work? (4) What special problems are there relative to manual-arts courses in the rural high school?

It is significant that, while admitting that college preparation should not greatly concern the organizer of the secondary school, the majority of the members of the committee felt that it was important to discuss the value of manual-arts courses as preparation for college. It was suggested by Mr. Kingsley, at the conference at Philadelphia, that—

The best way to prepare for college is to forget all about college entrance requirements and develop motives. Few students fail in college if, after completing a well-planned high-school course, they go to college to secure what the college has to offer. We should ignore "preparation for college" in the narrower sense as a legitimate aim in high-school work.

While we agree with the spirit of that statement, we are moved by three major considerations to insist that preparation for college must be taken into consideration in our discussion of the fundamental question submitted to our subcommittee, namely, What is the place of manual arts in secondary education? These three considerations are as follows:

First. Whatever we may undertake in reorganizing the secondary school, we must be careful to avoid anything which will create the impression that some courses are held in less esteem than others or that they are not "open at the top."

Second. For years to come there will be in our secondary schools principals and teachers who, no matter how valiantly our committee may assert that "the best preparation for life is the best preparation for college," will, nevertheless, regard as inferior any and all courses for which college entrance credit is not allowed. It is this attitude of the college-bred secondary-school teacher which constitutes the real domination of the college over the secondary school. Teachers of manual arts have had far too much experience in the past in trying to advance this subject in the face of this kind of opposition to allow them to forget the futility of trying to induce children to take the work when they understand that no "credit" is given for it. It is, unfortunately, true that the very children who have the least need of college credit and the least opportunity of making use of it are frequently deterred from taking those courses which are thus ranked as inferior.

Third. We believe that manual arts may be so taught as to contribute to the intellectual power and social outlook to such an extent as to fully justify its acceptance as a part of preparation for college.

In short, the committee, while reaching out after all the good that is promised by freedom from slavish adherence to educational tradition, while welcoming every new influence from without the schools which will make the work more real and more vital, while striving

especially to make the secondary school more attractive and of greater benefit to that large number of unschooled youths between 14 and 18 years of age, yet believes that this can be accomplished without curtailing any opportunities which the schools now afford our million and a third high-school pupils. Diversity of direction, differentiation of purpose, attention to individual needs and aptitudes, these must be attained without losing sight of the demonstrated values of all the older and more thoroughly organized school subjects which have made the American school system the acknowledged success which it is to-day in spite of its critics.

FRANK M. LEAVITT, *Chairman.*

UNIVERSITY OF CHICAGO, *Chicago, Ill.*

The other members of the committee on manual arts are as follows:

Wilson H. Henderson, secretary of the committee, director vocational training, Hammond, Ind.

L. R. Abbott, director manual training, Grand Rapids, Mich.

W. J. Bogan, principal Lane Technical High School, Chicago, Ill.

G. F. Buxton, Stout Institute, Menomonie, Wis.

P. W. Covert, Manual Training High School, Indianapolis, Ind.

A. D. Dean, chief of division of vocational schools, Albany, N. Y.

C. H. Howe, Stuyvesant High School, New York, N. Y.

Ben Johnson, director manual and industrial education, Seattle, Wash.

O. J. Kern, county superintendent of schools, Rockford, Ill.

C. W. Kirschner, principal Boardman Manual Training High School, New Haven, Conn.

C. A. Maupin, principal Industrial High School, Columbus, Ga.

E. E. McCready, director manual training, Newark, N. J.

R. W. Selvidge, professor manual arts University of Missouri, Columbia, Mo.

F. W. Turner, Mechanic Arts High School, Boston, Mass.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON MUSIC.

The qualities of thought and feeling out of which good music springs are highly desirable. They reflect a desire for beauty; they reveal the spirit of man in its more profound and universal relations and impulses. In common with the other arts and literature, and perhaps in higher degree, music tends to develop finer subjective life in the individual. This is true not only while the music is sounding. The quality of thought and feeling out of which it springs remains after the music ceases.

In public schools, where instruction in music is not primarily vocational or professional, the aim, conscious or unconscious, is obviously such subjective influence. A course in music that in due season and proper degree does not promise to adjust the learner in sympathetic response to the best music of the world is lacking in its proper quality, whatever marks of efficiency it may show.

Music in the grades has probably fulfilled its part in this development somewhat more efficiently than music in the high schools. Failure to bring the graduates of the public schools into sympathetic relation with the mature musical intelligence and interests of their various communities is not due so much to shortcomings in the work of the grades (though there are, of course, some such shortcomings in many places) as it is to neglect or sad misdirection of the work in high schools.

The late Mr. W. S. B. Mathews distinguished three appeals that music makes: The first to the ear, as "purified crystallized sound"—a sensuous beauty which every musician demands always; the second an appeal to the mind, depending upon memory, attention, perception of the relation of part to part, as balanced and beautiful tonal discourse; the third the appeal to the soul, as expressing mood, state of feeling, emotion.

Children in the grades are taught to value beauty of tone and to secure it in their singing, both for the sake of their musical taste and for correct use of their own voices. Their short songs should have grace of melody and simple perfection of form, revealing grace and clarity of musical thinking; but these qualities are desirable as musical experience and are not consciously analyzed and consciously valued. The songs used also have mood or at least color, but the moods are, of course, childlike and are not the moods which the music of the masters expresses. These must remain incomprehensible until the individual approaches the larger experiences of life. Technically the pupil learns, by the end of the eighth year, almost all elementary theory, and to sing at sight fluently and in parts simple hymn tunes, and to sing with enjoyment, after some practice, a number of the easier choruses from operas and oratorios, as well as some comparatively elaborate part songs.

One point should not be overlooked—the pupil's line of approach to music has been, and in public schools must be, up to this time, purely that of the song. Dr. W. G. Chambers, in a most valuable essay entitled "Modern Psychology and Music Study," has pointed out what an unfortunate foundation this is, if not broadened, upon which to base an understanding of the great instrumental works which crown the heights of musical expression. But in truth no more than we have outlined can be normally accomplished in the eight grades. The musical forms used are, until the end of this period, too simple to present any elaborate thematic development, and the amount of technical proficiency to be gained is too great to leave time for conscious consideration of larger art values, even in phases of this investigation which might be deemed appropriate to the child below the age of adolescence.

What practical and desirable developments then remain for the high school? A complete and correct answer to this question would mean a fulfillment of the task to which your committee is addressed. Before entering upon such answer it is well to note what often does follow. In many high schools this is nothing but a continued exercise, slightly extended, of the degree of power gained by the pupil in the eight grades below the high school. A graduation exercise in music might often appropriately mark the conclusion of the eighth year in school, for here, in many cases, ends the student's progress in musical knowledge and understanding.

If we would have an adult public interested in and appreciative of the great music of the masters, we must have general instruction in advanced phases of musical study. This instruction is appropriate and practicable in high schools, and to them properly belongs the task of articulating the music in the grades with the enlightened musical understanding and interest of the community.

In the several branches of musical study recommended in the following paragraphs it is assumed by the committee that this end—namely, bringing the student into knowledge and understanding of the great music of the world—will be kept persistently in view. The classes of material recommended are chosen with relation to their efficiency in attaining this end and methods of administration that will operate toward securing it are suggested.

ENSEMBLE SINGING.

In choosing material for ensemble singing it should not be forgotten that music, while it may ally itself with sentiments of religion, patriotism, love of home, and so forth, and while it should never ally itself with less worthy associations, is yet not to be valued upon the nature of such alliance. For music is essentially tone and tonal discourse and is beautiful as music in proportion to the beauty of tone, the beauty of the tonal procedure, and the beauty and nobility of mood out of which it sprang. Music, in short, need express musical thought only. Until this is admitted, understanding of musical beauty as a thing in itself can not be undertaken. Therefore, no commonplace tune, badly harmonized, should be admitted because the text associated with it means well. At least must this be true for all new music. Certain old melodies, quite unregarded as music either originally or now, but saved from extinction in the first instance by alliance with a text of value, and at present by tradition and many hallowed associations—these should be preserved so long as their appeal remains and while their use is not wholly perfunctory. We admit these because we are human beings, not because we are musical. But since the persons who respond to general human

sentiments are more numerous than those who respond to these same sentiments plus a response to purely musical beauties, there has been, and is, danger that the power to awaken such general humanistic response should be regarded as the one necessary quality in a song, and our chorus activities are therefore vitiated by the use of a number of songs no one of which would be regarded by musicians as belonging to the realm of music at all, and no one of which is in the same idiom as that music which all concede it is the purpose of a musical education to lead the student to love and enjoy.

While ensemble singing must in the nature of the case be the most general and basic music activity in a public-school system, it must be admitted that wise administration in this work is more necessary than in any other branch of musical study recommended if breadth of musical interest and understanding on the part of the students is to be the result. It can not be gainsaid that a pupil may sing during his entire high-school term the sort of songs that are sung in many high schools, study them in the manner in which they are studied in these schools, and come forth at the end of the time as remote from understanding and enjoyment of a Beethoven symphony or sonata as he would have been had he lacked such practice. This is not to be understood as meaning that he does not derive many other sorts of benefit from the practice. It does mean, however, that his participation as an adult in the progressive musical activities of his community is not made certain by the course of instruction which he has undergone. Not only does the comparative emphasis usually given the subject and text divert attention from purely musical values, but the physical exhilaration of singing may readily be mistaken for general musical enjoyment. Further, the songs may be selected largely because of their appropriateness to certain occasions, such as class days, field days, arbor day, patriotic festivals, etc., and in such case musical merit usually has to be sacrificed or can not be a prime factor in the choice of songs.

After material which has specific musical merit is chosen, its appropriateness to the voices and capacities of the adolescent singers must be considered, and a method of presentation must be found that will lead to wider musical interest and understanding. As any and all of the four years in high school are recommended for chorus practice, and as such principles of selection of music and presentation vary for the different years, the remaining recommendations are treated under two heads.

CHORUS PRACTICE IN FIRST AND SECOND YEARS.

In interest and articulation with the earlier experience of the pupils, chorus practice appeals especially to first and second year students; but in respect to voices, these two years are for many pupils quite

unfortunate, and a wise selection of musical material within a limited range is therefore necessary, as well as a careful and frequently repeated examination of each individual voice and a judicious assignment of each pupil to his appropriate vocal part. Mere efficient conquering of one song after another, with no thought for comparative musical merit, should not constitute the practice. Correct use of the voice and intelligent phrasing and interpretation of music in general should be the rule. Further, if the students are not yet proficient in sight singing and thoroughly well informed in elementary theory, these should be taught in connection with this chorus work. If, however, high-school standards which imply such abilities have been reached, the general incidental study should take the line of musical appreciation. Structural features of the songs should be pointed out and some knowledge of musical form should be gained. Motivation, the phrase, sequences should be studied. Some knowledge of the composers should be gained and the use of selections from operas, oratorios, or cantatas should be made the occasion for some study of these forms. Every effort should be made to broaden the student's general musical horizon through the medium of his interest and participation in chorus work.

CHORUS PRACTICE IN THIRD AND FOURTH YEARS.

The voices being more mature, the collateral lines of study should be different. Continuation of the incidental musical appreciation work recommended in connection with first and second year chorus practice is still advised. An invaluable activity further is the learning and performing of some suitable standard choral work every semester by the school chorus, assisted by excellent soloists and accompanied by a large orchestra. No surer means can be found to place the student in sympathetic relation to the advanced musical interests in his community.

MUSICAL APPRECIATION.

The work recommended along lines of musical appreciation, in connection with chorus practice, was incidental, the intention being to prevent an entirely indiscriminating and unappreciative attitude toward music in its "absolute" phases. Such study could not be thorough were it desired to make it so, for the forms presented would be in the main comparatively short, would all be vocal, and would present the easier works of a limited number of composers only, and these probably in vitally altered transcriptions and arrangements. A strong course of study of great musical literature should therefore be offered. This is continually growing more practicable because of improvements in and the increasing use of mechanical instruments

for reproducing such music, as, for instance, the player piano, the talking machine, and the player organ. With the help of any or all of these and the assistance of local musicians, vocal and instrumental, in addition to what the class and the teacher can provide, working as a chorus and also in solo capacities, a course such as that outlined in the following paragraphs can be presented more or less exhaustively and with results in the education of the students that are of inestimable value.

Musical appreciation as a high-school study is particularly appropriate for third and fourth year students, as the mature quality of thought and feeling with which great music is invested is largely incomprehensible prior to these years to any but the exceptional boy or girl. A musical experience and a technical foundation that can be gained only in the first two years are also necessary; and two years of chorus practice, such as was outlined, or two years of harmony or of orchestra ensemble are therefore recommended prior to undertaking this course. This recommendation is made notwithstanding the fact that classes of first and second year students in this branch have been known to members of the committee to make excellent progress.

The course in musical appreciation includes study of musical history, form, biography of musicians and æsthetics of music, but is not specifically any one of these. The course is best planned, therefore, through the selection of a large number of compositions which are to constitute the subject matter. These should be chosen on the following bases: (1) They should represent a large number of master composers, ancient and modern, in so far as the works of these masters engage the attention of the world to-day; (2) they should represent all important media of expression, as piano, orchestra, chorus, solo voice, solo instruments, chamber music ensembles, etc.; (3) they should represent all varieties of form and all larger forms, as the song forms, sonata form, rondo, etc., and the opera, oratorio, cantata, mass, etc.; (4) as representing either a composer or a form or style, they should be characteristic of that composer's form or style at his or its best and most individual moments.

The compositions chosen are to be heard and studied repeatedly, individually, as representative, in the ways specified, and comparatively. They are furthermore to be studied in relation to musical æsthetics, with regard to the nature and validity of the musical ideas upon which they rest and the degree of success attained in reaching these ideals. The lecture method with library reference is recommended, as textbooks of the exact kind needed are hardly to be found, if at all. Where possible, reported concert attendance should be a feature of the work.

HARMONY.

Inasmuch as this subject demands primarily quick and sensitive perception and retentive memory, it is especially appropriate to the first two years in high school, though it could well be substituted for musical appreciation in the last two years. The requisite talent for its study is not so great or so rare as is commonly supposed, but as musical interest is necessary it should be made an elective study.

An academic presentation of the subject, such as that found in almost all the older textbooks, is to be heartily condemned. The following features should be invariable:

(a) Ear training, carried throughout and at appropriate stages involving aural recognition of any interval, any triad as major, minor, diminished or augmented, any seventh chord (as to its intervals), of any tone and of any chord as to its scale relations, of any chord progression, of any modulation as to its harmonic procedure and the keys involved, of organ points, suspensions, anticipations; in short, involving aural recognition of all the harmonic material learned and used through the eye and symbols of notation.

(b) Instruction in the canons of melody writing; tendencies of melodic tones, melodic contour; motivation, the phrase, the process of coherent musical thought, the period.

(c) Harmonization of melodies (original or given) rather than harmonization of figured basses. (Thorough bass should be taught, but should constitute only a small part of the practice.)

(d) Harmonic analysis as revealing accepted musical usage by composers of the chord material presented.

(e) Freedom and musical proficiency in the use of harmonic material. Every harmonic factor is like a new word in the student's vocabulary, and is to be used by him in constructing numerous musical sentences until he is familiar with all of its merits, powers, and special qualities.

COUNTERPOINT.

This branch must be considered as an exceptional offering, possible only under especially favorable conditions, unless included under harmony. Three suggestions are offered as to its organization in a course and these are in what is believed to be their order of merit:

First. It may be included under harmony in a two-year's course, following the methods that seek to combine these two aspects of tonal organization, such as those of Percy Goetschins.

Second. It may be included in a four-years' course in contrapuntal harmony and composition, after this same method of combination.

Third. It may follow, as a separate two-years' course, the two years of harmony above advised.

ORCHESTRA ENSEMBLE.

This branch of musical study and practice should be an invariable offering. It should be open to any student qualifying for all four high-school years.

The musicianship that results naturally from ensemble playing is more advanced than that which arises naturally from ensemble singing. More hours of practice and preparation are necessary before successful participation is possible; the expression of the musical thought or impulse is less direct than in singing and becomes a matter, therefore, of greater reflection; the mechanical nature of the medium of expression makes sight reading and a knowledge of staff notation more exact; the number and diversity of the orchestral parts—diversity in pitch, tonal quality, and rhythmic procedure—make the whole a richer complex than is presented in chorus work; and this complexity and variety have attracted composers to orchestral expression for their greatest works.

Nevertheless the course in orchestral ensemble must be guarded, if it attains its best ends. The following recommendations are therefore urged:

First. The instruments should be played in the manner of their solo capacities, the ideals of chamber music and the refined treatment of each part in a symphony orchestra being ever kept in mind.

Second. Music should be selected that, however easy, still recognizes these particular values for each and every instrument.

Third. The orchestra should be considered an orchestral class or orchestral study club primarily, and a factor for the diversion of the school only incidentally.

Fourth. Instruments should be bought by or for the school, to remain school property, and these should be loaned, under proper restrictions, to students who will learn to play them. Instruments such as the double bass, timpani, French horn, oboe, bassoon (or any less rare that are yet usually lacking in any particular school) should be bought. Only by such means can orchestral richness and sonority be secured, the real idiom of orchestra be exemplified, and advanced orchestral literature be made practicable to the students.

Fifth. Seventh and eighth grade orchestras, similarly conducted and equipped with a like generous outfit of school-owned instruments should be organized as training schools for the high-school orchestra.

CREDIT FOR MUSIC APPLIED UNDER SPECIAL TEACHERS OUTSIDE OF SCHOOL.

It is recommended that study of voice, piano, organ, violin, or any orchestral instrument, under special teachers outside of the school, when seriously undertaken and properly examined and certified, shall receive equal credit with any academic, five-hour study regularly

pursued in high school, and shall be accepted in substitution for any regular school work that would command the same amount of credit. This recommendation is based upon the following considerations:

(a) The proficiency gained in singing or playing during the high-school period by many boys and girls proves, in a number of cases, to be of greater value to the individual in later life than any attainment gained in school in the same number of hours.

(b) Notwithstanding that most adults believe it desirable that young people should learn to sing or play an instrument, a severe handicap is put upon them in this respect by the necessity of attending, at the same time, to the heavy demands of their general education; and many students, including, even, a number who expect to be musicians, abandon or neglect music during their high-school years, when the greatest progress can and should be made, rather than jeopardize the securing of a diploma by neglecting some one branch of the regular course.

(c) We regard as untenable the assumption, expressed or implied, that an individual would be uneducated if he pursued three or four regular studies per year for four years and added music to these, but would be educated if he pursued four or five studies each year for four years and dropped music.

(d) We believe that this untenable assumption is not due to any active solution of the question of the place of music in an educational plan, but rather to a passive acceptance of traditional academic standards that are now outgrown and should be abandoned.

Choruses of boys, choruses of girls (glee clubs), and brass bands may under some conditions be deemed desirable. If organized, the general provisions recommended for securing educational value in chorus and orchestral work should be held to apply.

It is not expected that each high school shall offer all the branches here recommended. The offerings that presumably would be desirable in high schools of varying sizes were recommended in a report on high-school music made by a committee (Will Earhart, chairman) of the music supervisors' national conference to that body and adopted by them in St. Louis in 1912. This report also made certain recommendations as to the scholastic organization of all music work with respect to the number of hours, points credit, etc.

In adopting the report just mentioned, the music supervisors' national conference voted to include as an amendment an added article which should further recommend the crediting of musical study under teachers outside the school. This recommendation has already been made at length in the earlier part of this report.

WILL EARHART, *Chairman.*

PITTSBURGH, PA.

The other members of the committee on music are as follows:

E. B. Birge, supervisor of music, Indianapolis, Ind.
Henrietta G. Baker, supervisor of music, Baltimore, Md.
Ralph L. Baldwin, supervisor of music, Hartford, Conn.
Hollis E. Dann, Cornell University, Ithaca, N. Y.
Charles H. Farnsworth, Columbia University, New York, N. Y.
C. A. Fullerton, State Normal School, Cedar Falls, Iowa.
Karl W. Gehrkins, Oberlin College, Oberlin, Ohio.
Osborne McConathy, director of music, Chelsea, Mass.
W. Otto Miessner, supervisor of music, Oak Park, Ill.
Carrie McMackin, supervisor of music, Spartanburg, S. C.
Mrs. Parsons, director of music, Los Angeles, Cal.
Charles I. Rice, supervisor of music, Worcester, Mass.
Elsie M. Shaw, supervisor of music, St. Paul, Minn.

STATEMENT OF CHAIRMAN OF THE COMMITTEE ON BUSINESS.

This committee held a meeting in Philadelphia on Saturday, March 1, 1913, at the William Penn High School, and another at the State normal school, Salem, Mass., August 28, 1913. The statement that follows is a résumé of the work of the committee prepared by the chairman:

AIM OF THE COMMERCIAL COURSE.

The general aim of the high school is assumed to be—

1. To provide the student with the proper physical equipment, through instruction in physiology, hygiene, and by physical training.
2. To provide instruction in citizenship, through courses in civics and through social organizations of the school.
3. To lay the foundation for a broad appreciation of life, through courses in science, literature, art, music, etc.

The special aim of the commercial course is to enable the student to fill a place in commercial life. The course should be so planned as to equip the student to earn his livelihood immediately, in case he leaves before completion of the course, and also to equip him to fill more responsible positions as they may offer in the future.

SHALL SHORT COURSES BE GIVEN?

The answers usually made to the question depend upon the experience and location of the schools in which the experiment has been made. Fewer schools than formerly are now giving short courses. Some schools have changed from the short course to the long course, but there is yet no record of a school which has changed from a long course to the short course. The movement for short courses has received an impetus from the development of the vo-

cational courses given in several New England schools. The answer to the question, Do short courses give adequate preparation for commercial life, depends largely upon one's ideals of a student's commercial equipment. Where the aim is to secure for the student in as short a time as possible a position where he can earn his bread and butter, the short course is popularly advocated. Where the aim is to start the student on a commercial career worthy of the name, the long course is given. It may be possible to combine both elements and to plan a course so that at the end of each year some definite object is attained, and that a unit course might be regarded as terminating at the end of any year. Due care must be taken, however, not to lose continuity in instruction, for there is a certain momentum acquired by giving instruction in a subject continuously throughout several years. A course planned in yearly units might offer a wider range of electives than is now offered in commercial work, mathematics, and modern languages. The principle of election has won its way in the general courses, but it has apparently a harder battle before it in the special courses.

SHOULD COMMERCIAL WORK BE GIVEN IN THE SEVENTH AND EIGHTH GRADES OF THE GRAMMAR SCHOOL?

When one considers the abilities of seventh and eighth grade pupils, and what the business world demands of them, one realizes that commercial work given to such pupils must be very elementary in its character. The business man demands of such pupils the ability to write simple business letters, facility in the ordinary arithmetical operations, some general knowledge of business, such as how goods are bought, sold, ordered, charged, and delivered, and some knowledge of the materials of commerce. This is a demand which is not very different from the demand that the community makes upon all pupils of the seventh and eighth grades. On the other hand, if the aim of instruction in the seventh and eighth grades is to enable the pupil to determine his future vocation, he should have an opportunity to try not only commercial work, but industrial work as well. With the extension of departmental work in the seventh and eighth grades, it is possible to give the pupil an opportunity to test the different vocational fields. The suggested content of prevocational commercial work includes penmanship, commercial arithmetic, business forms, related customs, and simple accounts. An introductory commercial course should be given in the high school also for students who did not take it in the elementary school, in order to carry out fully the ideal of the seventh and eighth grades as a testing period. The general consensus of opinion seems to be in favor of an increasing amount of specialized work in the later years of the course.

PLANS FOR COMMITTEE WORK.

The committee plans to make a special study of the legitimate demands upon the schools for commercial training from the various groups of occupations. Occupations whose demands are to be studied are: (1) Agriculture, (2) manufacturing, (3) banking, (4) insurance, (5) transportation, (6) civil service, (7) professional offices, (8) wholesale establishments, and (9) retail establishments. The committee also proposes to study the various groups of subjects included in the commercial course, as follows: (1) Business technique, (2) secretarial and office training, (3) business English, (4) economics, commercial geography, and industrial history, (5) science and its applications, (6) advertising, and (7) salesmanship. Each member of the general committee will be expected to serve upon one subcommittee in the occupation group and one subcommittee in the subject group. This committee work will start early in 1914. In the meanwhile the committee will try to get in touch with persons who are willing and able to serve on these committees and to consider some of the general problems connected with the aim of commercial education, as commercial instruction in the seventh and eighth grades, the possibility of part-time instruction, etc. A special effort will be made through the National Chamber of Commerce and local chambers of commerce and boards of trade to enlist business men in the work of the committee in ascertaining the definite demands of commercial work upon the schools.

Some of the special problems of the commercial course that have been suggested to the committee are listed below. The committee would like more of these questions and is especially desirous of learning of the experiences of various schools with these or similar problems.

1. Is it possible to teach the elements of accounting in high schools?
2. Is it possible to teach business organization in high schools; and if so, to what extent should it be taught?
3. What equipment of mechanical devices used in offices should be used in schools?
4. What modifications of stenographic systems by the teacher are permissible?
5. Leaving cost of equipment out of consideration, is it desirable to teach typewriting as an office art before stenography?
6. What is an ideal arrangement of hours in stenography and typewriting? Should it be spread over a long period, with a few hours of instruction per week, or concentrated in a short period, with many hours of instruction per week?
7. What should be the content of the business-practice course?
8. How should spelling be taught?
9. Should business correspondence be divided into two courses, namely. (a) an elementary course containing the elementary work to be given in the early part of the course, and (b) an advanced course devoted to such problems as "follow-up" systems, selling goods by mail, etc.?

10. Can advertising be taught in high schools?
11. What practice work can be done in advertising?
12. How can the English and art departments cooperate in teaching advertising?
13. Can salesmanship be taught in high schools?
14. Is it worth while to teach advertising and salesmanship to boys and girls of high-school age?
15. How much time should be devoted to the study of local business conditions?
16. Should history and history of commerce be taught as separate subjects? If taught as separate subjects, should history of commerce be taught before or after economics?
17. What economic problems should be considered in the high-school course?
(Those most commonly considered now are trusts, banking and currency, labor, and transportation.)
18. In order to avoid the encyclopedic instruction of the older commercial geography, to what countries and products shall we limit the instruction, and which should we teach in detail?
19. Should the materials of commerce form the subject matter of a separate course, or should the material be given in connection with the sciences of the secondary schools, namely, biology, chemistry, and physics?
20. Should a fourth-year course be given in practical chemistry? Would the expense of the laboratory equipment required for such a course make it prohibitive?
21. How shall commercial schools secure the cooperation of business men?
22. To what extent shall we ask outside experts to give talks to the school or to classes?
23. What should be the content of the mathematical courses in commercial high schools?
24. How can the commercial school carry on part-time work?
25. Should not students of marked ability in the senior class who fill positions satisfactorily during the last 10 weeks of the course be permitted to graduate without taking an examination?

A. L. PUGH, *Chairman.*

HIGH SCHOOL OF COMMERCE,
New York City.

The other members of the committee on business are as follows:

- Wm. A. Barber, East Orange High School, East Orange, N. J.
 W. E. Bartholomew, State commercial inspector, Albany, N. Y.
 J. S. Curry, High School of Commerce, Cleveland, Ohio.
 Carlos B. Ellis, principal High School of Commerce, Springfield, Mass.
 R. A. Grant, McKinley High School, St. Louis, Mo.
 Cheesman A. Herrick, president of Girard College, Philadelphia, Pa.
 S. B. Koopman, High School of Commerce, New York, N. Y.
 Selby A. Moran, Ann Arbor High School, Ann Arbor, Mich.
 L. C. Rusmiser, High School of Commerce, Omaha, Nebr.
 Parke Schoch, principal West Philadelphia High School for Girls, Philadelphia, Pa.
 A. H. Sproul, Normal School, Salem, Mass.
 A. T. Swift, English High School, Providence, R. I.
 Frank V. Thompson, assistant superintendent of schools, Boston, Mass.
 Ernest Thurston, assistant superintendent of schools, Washington, D. C.
 W. H. Wigam, R. T. Crane High School, Chicago, Ill.

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A. BEGINNING WORK IN THE GARDEN.

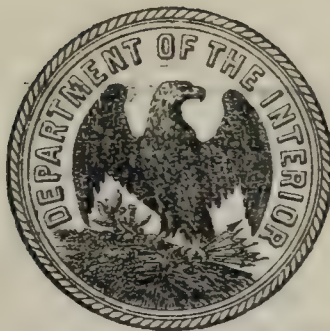


B. STUDYING THE PLANTS.

AN EXPERIMENTAL RURAL SCHOOL
AT WINTHROP COLLEGE
ROCK HILL, S. C.

BY

MRS. HETTY S. BROWNE



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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,

Washington, June 21, 1913.

SIR: The need of a better adaptation of the organization, spirit, and work of the rural school to the needs of rural life is generally admitted. Like all important changes in established systems and practices, this adaptation must come gradually, through many experiments more or less successful. The record of any such experiment, therefore, has much interest and value. A noteworthy experiment of this kind has been carried on for something more than two years in the Experimental Rural School of Winthrop College, Rock Hill, S. C., by Mrs. Hetty S. Browne, under direction of the State supervision of rural schools, in cooperation with the president of the college. The accompanying manuscript contains some account of this school, its methods and work. The style is simple, and many details interesting to the practical teacher are given. I recommend that the manuscript be published as a bulletin of the Bureau of Education.

Respectfully,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.



PREFACE.

About 79 per cent of the rural schools in the Southern States have only one teacher. It is evident, therefore, that a plan must be worked out which will enable this single teacher to make her school a factor in the development of the life around it. On November 2, 1910, the Peabody Board appropriated \$600 to work out such a plan. It was finally decided to attempt this through an experimental rural school in connection with Winthrop College, Rock Hill, S. C., under the direction of Mr. W. K. Tate, State supervisor of rural schools, and in cooperation with Pres. D. B. Johnson and members of the faculty of Winthrop College. Mrs. Hetty S. Browne, a teacher in the city schools of Spartanburg, agreed to undertake the experiment, which was started March 21, 1911.

At the outset the effort was to see clearly: First, what the farm wife must do all her life; second, what the farmer must do all his life. Then, regardless of tradition, the resolve was to make a school that will train the farm children for their future work in the home, on the farm, and in the social life around them.

It was recognized that activity has given the race its power. Man began by making crude weapons and tools out of wood, bone, stone, etc., and throughout the history of the race education has been in activity, not in books about it. Hence we began frankly with the activities of the farm, both in the home and in the fields. The children from the outset, felt a joy in the work. This stirred an interest in all their tools: plows, hoes, books, pencils, paper, everything used in furthering their work. Thus they became their own teachers and teachers of all those in contact with them. They mastered reading, writing, drawing, out of their own zeal which was born of the interest that grew out of their progress.

Simultaneous activities are made possible by this interest. A visitor will see a group working in the garden, another group on the veranda sewing, another in the kitchen at a cooking task, another in the workshop, and still another at their numbers or reading with the teacher in her room.

With these activities are related such essential technics as drawing, reading, writing, numbering, and modeling; so that the children master these largely without the irksome effort that is characteristic of the old schools. How this is done will be seen especially from Mrs. Browne's account of the corn cycle.

It will be noted that the exercises are ordered so as to develop the body along with the organs of sense and the mental power. The content of the words the children learn along with their activities is both concrete and vivid. From the outset they are led to put facts together and draw conclusions.

The purpose was to get at a practical working plan. For this reason the school was called "experimental" to distinguish it from the so-called model schools. The aim was not a cut-and-dried plan, but rather a working idea to enable the teacher to create a growing agency for the development of farm life.

Through Pres. D. B. Johnson the college provided house and grounds. The college likewise put in the simple equipment, which is within reach of any country community. The results warranted the college in taking over all the expenses after the first session. This success is due primarily to Mrs. Browne, who has developed the experiment which she graphically describes in this bulletin.

A. P. BOURLAND.

WASHINGTON, D. C., *July 2, 1913.*

AN EXPERIMENTAL RURAL SCHOOL.

THE PLANT.

The so-called good country schools are generally only poor copies of the city schools near them. They are likely to have all the formality and dry bookishness of the city, simply because the city is looked upon by country people as the source of everything good, schools included.

In establishing our experimental school, we endeavored to begin as far as possible without preconceived notions. It was to be essentially an "experimental" school, where we hoped to discover things. We tried to rid ourselves of the traditional schoolroom idea. We planned for no desks, for instance; in short, we sought to make a new start in school plant and equipment. Dr. Bourland had suggested a house and furniture suitable for a well-to-do farmer. Near the college campus we found a house which seemed to answer our purpose. It was a more or less typical farm dwelling, with a large veranda. Roses and vines clustered about it, and flowers grew in profusion everywhere on the grounds. There were plenty of trees to give shade; fruit trees, a mulberry tree, and two Carolina poplars. The house had an attractive, homelike appearance, inside and out, and with a little work by the college carpenter it was easily made ready for our occupancy.

We determined to fit up three of the rooms. The first we furnished somewhat like a sitting room. The center of attraction here was a long table with a burlap cover, on which the following books were temptingly displayed:

Mother Goose Nursery Tales.
Pinafore Palace.
Lang's Fairy Tales.
Arabian Nights.
Robinson Crusoe.
Nursery Tales and Fables.
Lang: Stories of the Vikings.

Mother Goose Nursery Rhymes.
Grimm's Fairy Tales.
Scudder: The Children's Own Book.
Pilgrim's Progress.
Pinocchio.
Æsop's Fables.
Popular Tales from the Norse.

There were several copies of some of these books. Artistic curtains of ecru scrim were so hung as to soften the outlines of the windows without obstructing the light. Pots of plants were placed on a

broad shelf before the windows, and added considerably to the cheerful appearance of the room. Plain shelves were arranged for writing materials, drawing materials, scissors, and clay for modeling, as well as for the sewing materials—thimbles, needles, thread, tape, etc. A few chairs completed the furnishings of this room.

The next room we furnished as a carpenter's shop. The equipment was very simple, consisting of two benches (one bought, the other made by the college carpenter), saws, hammers, chisel, square, and a brace and bit.

The third room we set aside as the kitchen. We equipped it with a big coal range, two kitchen tables, a quantity of cooking utensils, and dishes.

On the veranda near the pump we hung our drinking cups, one for each child.

The veranda made an ideal outdoor schoolroom, and there were few times during the winter that we could not spend several hours daily there with comfort.

There was enough ground attached to the house for a large garden, as well as for a generous playground for the children. As part of the garden outfit we had a toolroom in which to keep the garden implements—wheel hoes ("plows," as the children proudly called them), rakes, hoes, trowels, etc.

From the very beginning the garden was made the center of activity, and has never failed to be a source of enjoyment and instruction for both teacher and pupils.

THE EXPERIMENTAL BEGINNING.

The school was opened in March. As no country children were immediately available, we got our children from a near-by cotton-mill village. A few came from the college campus.

The first thing the teacher did when the children came was to show them the house. She next led the way to the garden. The children were delighted when told that each was to have a garden patch of his own, and they wished to begin work immediately.

A 3-foot walk was made, extending down the middle of the garden, and the individual plats were to be laid off on each side of this. By measuring, it was found to be 40 feet each way from the walk to the fence, and it was agreed to let this determine the length of the garden. The width was the next question. In their zeal the children proposed very large gardens, but the teacher limited the width to 7 feet. A walk 1 foot wide separated the divisions.

We found trouble in getting the sides of our garden straight. One boy suggested that his father used a garden line to make his rows straight. He told us how the line was made, and under his direction we each made one, using two sharpened stakes and a piece

of twine. After much measuring the gardens were laid off, and each farmer began proudly to dig and rake his soil preparatory to putting in the seed.

The next morning some of the children had forgotten which garden had been assigned them. The teacher had to get the plan that she had made the day before to settle the difficulty. How to prevent this occurring every day was the problem. After talking the matter over, we decided to make wooden stakes and print the owner's name on each. Each child was encouraged to go to the blackboard and with a ruler make a drawing of the way he thought the stake should look. After this the teacher and pupils considered the plans, and each child was allowed to tell why he had made his stake in a certain way. All agreed that it should be in the form of a cross, with the upright piece long enough to be driven firmly into the ground and the crosspiece long enough to contain the owner's name. The width of each piece was considered, and it was decided that the upright piece should be 2 by 18 inches and the crosspiece 3 by 12 inches. An old dry-goods box furnished the lumber. It was broken into pieces, and the work of measuring, sawing, and nailing began.

The children had to do considerable thinking for themselves; for example, in finding the center of the crosspiece, in order to nail it properly to the upright. The younger children were shown how to take a piece of paper the exact length of the piece which they wished to divide and to fold it over end to end. Of course there were some who were curious to know how long each piece of paper really was; they measured it for themselves, and found that each half was 6 inches.

Some drill in printing was necessary before the children could attempt printing the name on the stake. Oblongs the exact size of the crosspiece were drawn on the blackboard and the children practiced printing their names in these, using the teacher's copy as a model. When a child had gained sufficient skill in printing his name on the blackboard he printed it in pencil on his stake, and then went over the pencil marks with black paint.

That night a heavy rain came. Our stakes stood the test bravely, but our paths were all obliterated. Where did each garden begin and end? It was evident that we must have three more stakes and mark all four of the corners. Each child went to work and soon had the additional markers completed and in place. This time only straight stakes were made. Each was 2 by 18 inches.

In all of this work the teacher was pleased to see how eager the older children were to help the younger. With a few suggestions from the teacher, they learned to render real help, instead of doing the work for them.

While all of this was going on in the garden the more formal studies had by no means been neglected. The children had been learning to read and to write and to do various other things. For their first reading and writing lessons they had: "I have a garden. Carrie has a garden," etc.

From the garden the children learned the words soil, rock, clod, loose, hard, etc. Then the names of the tools: Hoe, rake, plow, trowel, line, etc. When they returned to the house they built these words with cut-out letters. Gradually new words were added, such as:

seed	tiny	cover
drill	block	plant
long	garden	

In making the stakes they learned these:

board	cross	nail
piece	long	cut
inches	name	hammer
stake	square	hatchet
oblong	measure	ruler
upright	saw	

In sewing they also learned a number of words:

thread	needle	tape
scissors	thimble	measure
cloth	cut	stitch
baste	hem	
fold	pin	

The teacher always put the nouns in one column, the adjectives in another, and the verbs in still another. She said nothing, however, about grammar or the parts of speech. She left this for the child to grow accustomed to.

The older children were encouraged to select books and to read either to themselves or to groups of others. Every day there was a social period on the veranda. The children all brought their chairs and placed them in a circle. The older ones would tell what they had read. The younger children were also expected to take part. Each child told a story, repeated a rhyme, gave a riddle, or did something for the entertainment of all.

The children were encouraged in attempts at dramatizing stories they liked. They had good times playing "Chicken Little," "The Three Bears," "Billy Goat's Gruff," etc. The Mother Goose Rhymes were a source of great pleasure at this time, too. The teacher read the rhymes, the children repeating with her those they knew.

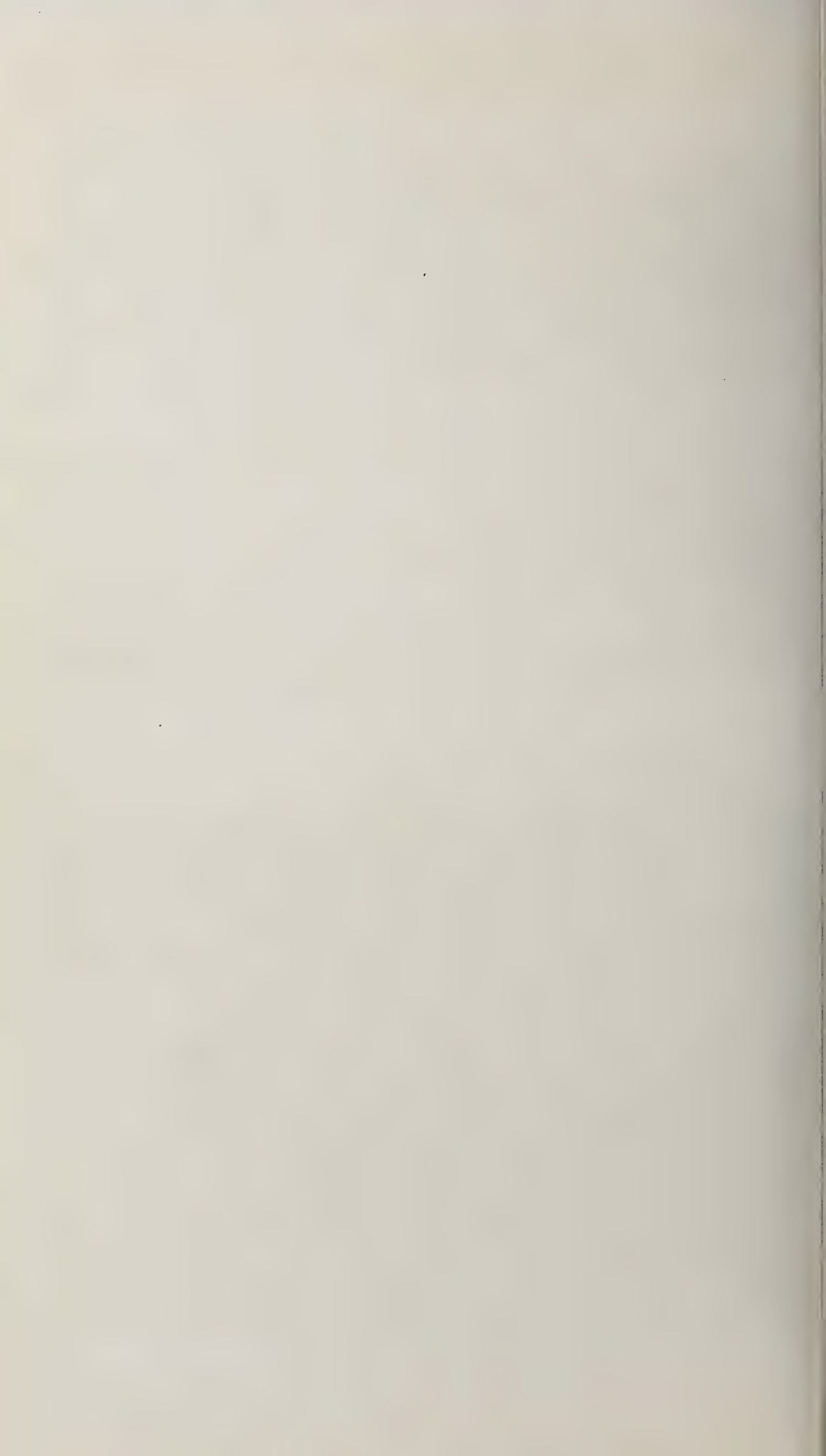
The household duties also formed part of the regular program of the day. On reaching school the children ran to the blackboard



A. ALL HANDS AT WORK.



B. READY FOR LUNCH ON THE VERANDA.





A. THE READING HOUR.



B. ROBINSON CRUSOE'S CAVE, BUILT BY THE CHILDREN.



in the kitchen to see what duties had been assigned them. The teacher had written on the blackboard something like this:

Wash and hang up cups_____	Nell and Aggie.
Bring water_____	Jessie and McIver.
Fill kettles_____	Lawrence and Carrie.
Cut flowers_____	Estelle.
Arrange flowers_____	Wilma and Bonnie.
Dust_____	Mamie.
Tend fire_____	John.
Arrange books_____	Nellie May.
Open and arrange carpenter shop_____	Conlie.
Tidy up kitchen_____	Maggie.
Dust erasers_____	Charlie and Willie.

When these tasks were done, the children took up various activities. Some got books and read. Some of the boys went to work in the carpenter shop or garden, while a number of the girls went to work at their sewing. This activity was essentially spontaneous and natural; there was no restraint. Children were allowed to talk in an ordinary tone of voice when it did not disturb some one else. Bruce wanted to know if he might whistle when he sawed. He was told that he might. The question of discipline took care of itself. All were busy and happy. The teacher's part was to help the children and not to dictate to them.

In all of our work we tried to make only those things of which we felt the need. The garden lines and stakes were made when it was necessary to have them. We soon found that we must have towels. After working in the garden our hands were soiled. We could wash them at the pump, but we needed something on which to dry them. Suppose each one hemmed a towel? The towel was accordingly planned and worked out in response to a definite need. The amount of material and the cost were ascertained, and then the sewing began. After the towels were completed, the owner's initials were worked on them in red. The word "initial" was a new one to the children, and as they worked each one gave the initials of a member of his family. They were taught that a person's initials must be written in capital letters with a period placed after each one.

The making of the towels furnished sewing for two months. After the individual towels were hemmed, others were hemmed for use in the kitchen.

Some of the words learned in making the towels were: Towel, side, end, hem, selvage, center, feet, inches, corners, square, oblong, width, length, long, small, wide, even, straight, measure, fold, under, turn, stitch, baste, ravel.

"When are we going to cook?" was the question asked daily for the first few days. "Before we cook we must understand our range," was the reply. The children knew the names of most of the

parts of the range and their uses, but they did not understand the drafts. A fire was lighted in the school range; then the drafts were closed, and the fire went out. The fire was built again. The drafts were turned on. The fire roared up the chimney. The top of the range was hot, but the oven was still cold. How could we send heat to the oven? Evidently we must send the flame against it. The teacher then showed the children how to regulate the dampers for heating the oven and the water tank and how to boil water. Hot water or kettle tea was made and served for luncheon.

At the simple luncheon which followed this first cooking lesson the teacher secured a glimpse of the amount of true education that can be gained through the proper serving and eating of a meal.

Arithmetic was carefully related to the different activities. A great deal of number work can be obtained from the garden, the carpenter shop, the kitchen, and in sewing. The children measured the gardens, the length and the width. They measured the walks, the distance between the rows, the distance that the seeds were planted apart, etc. They counted the number of seed planted, and then learned to estimate the number of seed and not to count each one.

In cooking they learned to measure the materials they had to cook and to tell time by the clock in order that the food might cook the proper length of time.

In sewing they learned to measure by the yard, foot, and inch. In making towels the following number work was studied:

Length of towel in feet. Length of towel in inches. Width of towel in feet. Width of towel in inches. How many inches in one side of towel? How many inches in two sides of towel? How many inches in one end of towel? How many inches in two ends of towel? How many inches in one side and one end of towel? How many inches in one side and two ends of towel? How many inches all around the towel? What is meant by "perimeter"? How long is the tape for your loop? Fold it in half. How many inches in each half? What is one-half of 5 inches? Find the half of the end of your towel. Measure how many inches in one-half of it. What is one-half of 18 inches?

The care of the towels gave rise to another activity—that of washing. We had a tub and washboard, and as the children washed they sang:

This is the way we wash our towels,
Wash our towels,
Wash our towels.
This is the way we wash our towels,
Etc.

After this they were hung smoothly on the line and fastened by clothespins. When dry they were ironed. In all of this work the element of play entered; at the same time the children were shown how to do the work neatly and accurately.

The children were encouraged to talk as they worked, to describe the work, or to tell of something they had seen in the garden. If mistakes in English were made, they were so kindly corrected that the child was not embarrassed. In this natural social atmosphere the children rapidly gained facility in using the mother tongue.

We believed that we had rid ourselves of all preconceived notions of school, but one or two still persisted unconsciously. There was the traditional recess, for instance. At 10.30 sharp every day, no matter how interested the children were in the work they were doing, a recess was taken. The teacher played games with the children. They were natural children and liked games, but they liked better that pleasant game they had been playing, which some people erroneously call work. One by one the children gradually slipped back to their work. After the teacher had attempted to do things in her way for a while, she decided she was making a mistake, and thereafter she let the children order it in their own natural way.

A part of every day was spent in the garden. It was getting late in the spring, and very little time could be given to study of the soil or of the germination of the seeds. We planted onions, turnips, potatoes, radishes, lettuce, peas, beets, corn, beans, Swiss chard, okra, and tomatoes. Later peanuts and pop corn were planted. These were harvested in the fall, when the children returned to school.

School began in March and ended in July. During the summer vacation the children who lived nearest took charge of the garden and used the vegetables.

IN THE FALL.

Although gratified with the progress made during our first session, we realized that we must have real country children for our undertaking. A rural school within 4 miles of the college agreed to invest the amount they had been paying a teacher for a few months in the salary of a driver for nine months, so that the children could be hauled in each day. The college furnished the wagon.

When the country children came in September, practically a new start was made. Our pupils were not entirely new, however. We already had in our school some pupils who, though they came from the mill, were children of parents from the country and had many of the instincts of country children. We decided to keep these. One of our boys from the campus, McIver Coker, also stayed with us. These children were of great service in helping to give the spirit of the school to the newcomers. Most of the new pupils had been to school, but they had learned only the restrictions—the “thou shalt nots.” It required much skill on the part of the teacher to help them to see that school was a place for work, pleasure, fun, and even frolic.

Among the newcomers were two sisters, aged 14 and 16, respectively. They had been to 10 different teachers. They had learned to hold a book properly, to turn the pages, and laboriously to spell out a few words. They knew no Mother Goose Rhymes, none of the old Fairy Stories, and no Bible stories. Their training in arithmetic had taught them to repeat what they called the second line of the multiplication table, thus: $2 \times 1 = 2$, $2 \times 2 = 4$, $2 \times 3 = 6$, $2 \times 4 = 8$, etc.

To these girls our school was a revelation. It was particularly hard for them to understand that there might be fun in anything connected with school. Thus they disapproved of the running and racing by the children that took place when the school driver let down his charges a block from the school. They scolded the other children for it, later explaining to the teacher that they had done so because it "wasn't proper to run in town; city folks would laugh at them." To this the teacher laughingly replied that she liked to run, too, and straightway proposed a race, in which all took part except Maggie and Mary, who were not yet ready to accept the new conditions.

The many games also astounded Mary and Maggie. The teacher was a believer in games for the country school, and she led in them. Not only were there games at school, but every month there was a party, to which the home folks were invited. The first one was at Halloween. We decorated our rooms with autumn leaves. We made jack-o'-lanterns from pumpkins brought by the boys. These and a roaring fire in the fireplace gave all the light we needed. When the guests arrived we popped corn over the coals, bobbed for apples, tried to bite an apple suspended from the ceiling by a string, and played other Halloween games. The refreshments consisted of popcorn and roasted peanuts from our own gardens and apples bought with the money we had earned from the sale of a peck of potatoes from our garden. A few circle games, learned during the month, gave a finishing touch to our Halloween party.

In November we celebrated Thanksgiving Day. Again we decorated with autumn leaves. The home folks brought picnic baskets. The children made hot coffee for their elders and kettle tea for themselves and their younger guests. The table was laden with three big bowls of fruits and nuts. We had enough popcorn and peanuts from our garden for this celebration also. After dinner we put the tables out of the way, and made a cozy circle all around the room, two deep in some places. Parts of Longfellow's *Hiawatha's Childhood* had been memorized by the children in their regular school work. The children recited this naturally, one taking it up where another left off. The Thanksgiving Story was read by one of the children, and other poems and songs followed. All of the children took part just



A. THE VERANDA.



B. SEWING LESSON ON THE VERANDA.



A. AT WORK ON THE VERANDA.



B. A TABLE IN THE TEACHER'S ROOM.

as they did at their social period every day. Games brought the celebration to a close.

These two parties were typical. Christmas, Lee's Birthday, Valentine's Day, Washington's Birthday, and Easter were appropriately celebrated. In May we held a picnic.

THE GARDEN.

The garden was, indeed, the center of the school activity. All the children were farmers, girls as well as boys. Eventually they studied the soil as to formation, varieties of soil—gravel, sand, clay, humus—the moisture in the soil, the amount of moisture, and the action of water gravitation and capillarity. They studied the weather, and learned the effect that wind, rain, snow, and frost have on a farm. In an elementary way they learned something of fertilizers. They learned why a cover crop is used on the uncultivated portions of a farm and of the necessity for a rotation of crops.

They learned how far apart rows must be and how far apart the seed in the row. They estimated the amount of seed necessary for their garden, and were encouraged to consult seed catalogues, Government bulletins, and various books on agriculture.

They germinated some of the various kinds of seed, and discovered the conditions necessary for germination. They compared the different seeds, as to their manner of germination. They learned the names of the parts of the seed, e. g., of the bean: Seed coats, hilum, microphyle, cotyledons, radicle, plumule, etc. They studied the methods of cultivation. They watched the unfolding of each plant and learned the names of all the parts—root, stem, leaf, bud, blossom, fruit, seed. They learned the kinds of roots, the kinds of stems, and the kinds of leaves. They learned the parts of the blossom and that there were two essential parts. They learned that these two parts are often borne on different parts of the plant and even on separate plants.

They learned something of the plant families. It was easy to see that the potato and horse nettle belonged to the same family by the similarity of the leaf and bloom and by the Colorado potato beetle infesting both plants. It was harder to find that the tomato belonged to this family also.

They studied the weeds and grasses in the garden, first, to know how they injured the plants and, second, to find the best way in which to get rid of them.

Animals, birds, insects, toads, and worms were studied in their relation to the garden. The animals found in the garden were the mole and the rabbit. The birds that visited it were the English sparrow and some of the other sparrows, the mockingbird, bluebird,

brown thrush, woodpecker, flicker, cardinal, orchard oriole, and blue jay. The children called the English sparrow "town bird." They found him altogether unlovely. The others we decided were our friends. Of insects there were a host, and of all these only one, the little ladybird beetle, was a friend. Some of the foes were aphides, potato beetles, cutworms, corn worms, larva of cabbage butterfly, and squash bug. The children found that the homely toad and the earth worm were friends. Each child kept a record of the observations made in a book which he called "A Book of Bugs."

The following was written in one of these books about the cabbage butterfly:

CABBAGE BUTTERFLY.

McIver caught a cabbage butterfly. It is greenish, yellowish, whitish. The wings have dark markings on them. It has four wings. It has six legs. It has two antennæ. They have knobs on them.

THE LARVA.

Estelle found a larva of the cabbage butterfly on a cabbage leaf. It looks like a green worm.

THE EGGS.

Jessie found some eggs of the cabbage butterfly on a cabbage leaf. The eggs are small. They are just the color of the cabbage leaf.

May 28. We have not found a chrysalis. [A chrysalis was found later.]

Each child kept a Garden Book in which he recorded the various things of interest about his plants from the time they were planted until they were harvested. Below is a copy of what was written in a garden book about peas.

PEAS.

Variety—Lightning Excelsior.

Planted—March 19.

Up—March 25.

In bloom—April 11.

Saw first pods—April 30.

Gathered peas to eat—May 14.

May 14—Picked one peck of peas.

May 16—Picked one peck of peas.

May 17—Picked one peck of peas.

May 21—Picked one peck of peas.

As the vegetables were ready for the table the children studied the various ways of cooking and serving them. They learned too, in an elementary way, something of their composition and food value. Besides the vegetables used at school, some were taken home; others were sold and the money used for the benefit of the entire school. A record was kept of the sale of the vegetables and of the expenditure of the money.

A STUDY OF CORN.

The extent to which the work in reading, number, and writing is combined with other activities in our school has already been noted. To indicate the development of this plan it is desirable to take one plant from our garden and show in detail how we combined nature study and the more formal subjects. Corn is the plant taken for this illustration.

Our study of corn began in the winter with a study of soil. We asked ourselves what soil was. The children brought some soil in where we could all examine it. The children felt the soil. Since it was moist, it must contain water. How much water? How could we find out? After some time one child thought of weighing the soil, drying it out, and weighing it again. We took three pounds (a little over a quart) weighed it, let it dry in the sun and weighed it again. The loss in weight was only about one-eighth of a pound. We then dried it out in the oven of the stove and weighed it again. The loss this time was a little less than one-eighth of a pound, making the total loss one-eighth pound plus one-eighth pound, or one-fourth pound. What became of the water? The teacher then taught the word "evaporated" for dried out.

The teacher said that she knew how to get rid of something else that was in the soil. She weighed the soil that had had all the water evaporated from it and recorded the weight. She put the soil in an iron vessel on the stove and allowed it to get red hot. When it was cold again it was weighed and the result was a slight loss in weight. What was it that burned in the soil? The teacher showed the children the humus. She let them see the tiny pieces of leaves, sticks, etc., and asked them to guess now what was burned out of the soil. The teacher explained the expression "organic matter" and showed that "organic matter" was in the garden soil, although it could not be seen. In this way we discovered two things in our soil—water and organic matter.

The children examined the soil again and discovered a third element—sand. The teacher called the children's attention to the resemblance of the sand grains to little rocks, and said, "How do you think these little rocks were made? Suppose we rub two stones together over this piece of white paper." The children did this and saw the tiny particles of rock. "Do you think this could have happened naturally? What would rub stones together? Cultivating soil rubs them together. Stones rolling down a hill rub together. Don't you think the wind might help? Water sometimes carries stones along and rubs them together." The teacher took a wide-mouthed pickle bottle and put stones into it. Then clear water was poured in. "Look at the water and stones. The water is almost

clear. Shake it vigorously for a long time. Let it settle. What do you see at the bottom of the bottle? Do you think the streams of water wear away rocks? What do they do with the particles of rock that they wear away? Where did these particles fall in our bottle? Where would they fall in the stream? Which would fall first, the large or small particles?" Next we took a fruit jar and placed in it common soil, sand, and gravel, and poured some water in. After shaking it vigorously until it was thoroughly mixed, we set it aside to settle. "Where are the gravel, sand, and silt? Let us go to a stream the next time it rains and see if this is really true." We did so, and found silt at the mouth of the stream, then sand, then gravel, and last of all the stones.

We found some disintegrating granite. One boy found some other rock that was disintegrating. "Why is it going to pieces? What made our jar break when we left water in it that cold night? Do you think something of the kind could have happened here? Tell me how. Tiny particles of water in the rock freeze; this causes the rock to break into pieces." The teacher then told in a simple way of the chemical action of air and water in the weathering of rocks.

We made a collection of stones from the neighborhood. When we went to the field for the minerals the children noticed the different kinds of soils and gathered specimens of each kind. We collected gravel, sand, clay, and humus. The teacher wished to show the children the difference in water gravitation and capillarity of the four kinds of soil collected. To do this we had to have a soil tester. We made a small wooden bench with long legs, and bored auger holes in the top large enough to allow a small round lamp chimney to be run through it up to the enlarged part that fits over the burner. Four lamp chimneys were used. They were placed in an inverted position. Netting was then tied over the lower end of the chimneys.

To show the difference in water gravitation of the various soils, an equal amount of each kind of soil was placed in each chimney and an equal quantity of water poured over the soil. The pupils observed: (1) Which was wet through first; (2) into which the water sank most rapidly; (3) through which the water began to pass first; (4) the appearance of the water as it came through; (5) through which soil most water passed; (6) the difference between clay and humus.

The soil was then allowed to dry in tubes. The children now noticed: (1) Which soil dried first; (2) appearance of the different soils when dry. The children were asked: "Do you think gravel good for our garden? Why not?" We next tested the capillarity of the four kinds of soils. Clean tubes were taken, and an equal amount of soil was placed in each tube as before. Instead of pour-

ing the water into the tubes, however, we now put the tube into water and observed how the water rose in the soils. Equal quantities of water were put into four glass cups and one was placed under each tube. The pupils watched to see in which tube the water rose most evenly. They were asked: "Which soil do you think is best for our garden? Why?" We allowed the soil to dry in the tubes. We then took out the soil and put in thoroughly pulverized soil to test for gravitation and capillarity. "Through which soil does water soak most readily? What kind of soil do you think it is best for us to have in our garden, soil that is packed and hard, or loose, pulverized soil? How deep do you think soil should be loose? Why?" The teacher then told of the benefit of deep plowing and of the necessity for having a thoroughly pulverized seed bed. She then asked these questions: "What kind of a road does clay make? How could you help a muddy clay road? What kind of a road does sand make? How could you help a sandy road?"

Having completed our study of the soil, we next had to find what our plants needed to make them grow. We made four experiments, as follows:

I. Place grains of corn between sheets of damp blotting paper. Leave some in warm schoolroom and take other into a cold room.

II. Put some corn into damp sawdust and keep it damp. Put some in dry sawdust and keep it dry. Place side by side in sunny window. (The children took this as a huge joke. They knew that seed must have water if it is to come up.)

III. Put some corn into a tin can of soil that has a hole in the bottom and is supplied with drainage. Put some corn into can of soil with no hole in the bottom. Place both in sunny window side by side and water at stated periods with equal quantities of water.

IV. Put some corn on damp blotting paper and allow it to get air. Put some corn on damp blotting paper and close box tightly, thus excluding the air.

From experiment I they learned that seed must have warmth to germinate. From experiment II they learned that seed must have moisture to germinate. From experiment III they learned that there can be too much water and also that the seed will rot if allowed to lie in water. From experiment IV they learned that seed must have air to germinate.

"Are all seed equally good?" was the next question. "Suppose we test some seed." Ears of corn were brought from home, and a few were selected for testing. They were numbered 1, 2, 3, 4, 5, 6. We made a shallow box and filled it with garden soil. We divided this with tape into 6 sections, and numbered the sections from 1 to 6. Five grains from each ear of corn were then planted in the section with the corresponding number. They were watered thoroughly and placed in a sunny window. The same treatment was given to each section of the box.

The teacher brought out that the ear with the largest number of grains of corn to germinate was the best ear for seed. As the corn was shelled, the children noticed the position of the grains in the row. "Notice the size and shape of different grains. In which ear do you think there is most corn? Why? Notice the scar left on the cob. Which do you think is better, a large cob or a small one? Why?"

We next made a study of a grain of corn. We took some dry corn and some corn that had been soaked in warm water over night. The children looked at the grain of dry corn and noticed the part that was joined to the cob. "Notice the dent in one side," said the teacher. "Take a grain of soaked corn. What is the first part of the corn that you see? Take off the seed coat and note the germ. Remove it with a sharp pointed knife." They then took the corn that had been between damp sheets of blotting paper, and found germination further advanced. The teacher had them take the germ from the corn and see if it would grow without the rest of the grain of corn. After a few days: "Did it grow? What part of the corn then is the essential part?" They observed it for a few more days: "What has happened to our corn? Why do you suppose it died? What do you think was in the part we removed? How did the bean carry its food?" The children learned that corn has two supplies of food—cotyledon and endosperm. They noticed the radicle as it emerged, then the plumule. "Which came out first? Note the grains of corn planted in damp sawdust. Note the position of the plumule, of the radicle. Where is the grain of corn? Where was the germ when it germinated?"

We thought it interesting to see how our plant grew. We took the corn that had been planted between pieces of damp blotting paper. The plumule and radicle had both emerged from the grain of corn. With pen and ink we made horizontal marks around the root and the stalk of the corn one-sixteenth of an inch apart. We had to be careful to put a mark on the very tip of the root and of the stalk. In the morning there was a surprise for us. We marked again, to be sure we were observing correctly. We saw that we put a mark on the very tip of the root. We examined the plant again next morning. "Were we right? How does the root grow? How does the stalk grow?" The term "growing tip" was then taught. We examined the growing tip and found it very tender. In considering what kind of soil is needed for the little root to push its way through, we found one more good reason why the seed bed should be thoroughly pulverized. We made drawings of corn: First the dry grain, then the soaked grain, then grain with the root peeping out, grain with the root and plumule both out well, and after an interval of a few days a grain with the growth of both plumule and radicle well started.

The next step was to consider how close we should plant our corn. The children examined a picture of corn, with its immense root system. "What do plants have to have? Air, heat, light, moisture. With what must we provide our corn in the field? What will happen if we plant our corn too close together?" The boys measured the rows of corn at home and found how far apart they were, as well as how far apart the stalks of corn were in the row. "Why do you suppose your father made his rows so far apart? So the plants would get sunshine and air. But there is another good reason. How does your father cultivate his corn? What would happen to his corn if he got it too close? How are we going to cultivate our corn? Do you think that for this reason we could plant ours a little closer? Suppose we plant our corn in rows 2 feet apart and in hills $1\frac{1}{2}$ feet apart. Now, how many grains shall we put in a hill? What must we think of? Which would be easier, to pull up a stalk or two of corn or to have to plant over again?" We decided to put five grains of corn in a hill. With yardstick and chalk we marked off rows 2 feet apart on the floor of the veranda and indicated the position of the hills. "How many hills will there be in each row? How many grains of corn needed for one row? For two rows?"

When the soil was in readiness we laid off rows 2 feet apart with the help of the garden line. We dropped seed 18 inches apart in drill, as we had decided. As the seed were dropped, the barefoot children pressed them down firmly into the soil. They did this because they were told that soil fitting closely around a seed will keep it moist, and a seed requires moisture to germinate. They covered over with soil, pressing the earth firmly against the corn. The top soil was left soft and loose.

The children watched the first tiny leaf come out. They noticed where the seed was and compared it with the bean, which they had previously studied. They noted the growth of corn, how one leaf unfolds, showing another one curled and ready to unfold, and so on.

The children were instructed that they could not begin to cultivate corn too soon. "We must keep our top soil soft and loose," the teacher told them. "Why? Suppose we try this experiment." Into a shallow box we put some moist soil. Over part of it we put a layer of dry dust from the road. We then set it in the sun for a day or two, and finally removed the dry dust to look at the soil. "Which shows more moisture, that covered by the dust or that left bare? Why did the water in the bare soil evaporate more quickly? Can you give a good reason now for keeping a layer of pulverized soil on top of our garden?" Thus the expression "dust mulch" was taught. We looked at earth under planks, boards, and stones, and the children learned that it was moist because the stone and board act exactly as a dust mulch.

From our experiments we learned that water rises in soil. Questions that we investigated were: "In what kind of soil does it rise more readily—firmly packed or loose, lumpy or well pulverized? Which of these soils dries out more readily? In what condition should we keep the soil around our corn? Into what kind of soil did water sink more readily? Would it be wise to have our soil in a suitable condition for the water to sink into?" We considered again the immense root system of the corn and noted the fine mat of roots near the surface of the ground. The children were cautioned against cultivating the corn too closely after it had grown large enough to have these roots.

The children kept a record of all the experiments performed and of the planting and cultivation of the corn. They also made a record of all the animals and insects that molested the corn.

One morning we found traces of a mole. We dug into a burrow, but could not find the mole. Later one of the children brought a mole caught at home. We then made a complete study of the mole, and afterwards of the corn worm, which is really not a worm at all, but a larva.

The children noticed smut on the corn and read that it was best to burn the stalk infested with this disease to keep it from spreading all over a field.

We found other enemies of the corn: Weeds and grass had made their appearance. We learned that they hurt our corn by taking from the soil the food and moisture that it might have; they kept light, air, and sunshine from corn.

We learned the names and habits of the weeds and grasses found in the garden and studied how to get rid of them. We decided that to get rid of them we must first know how they made new plants. Some had only seed. Some had seed and sent down a tap root that lives all winter. The quack grass had seed, but would grow from cuttings and keep alive all winter. We made drawings and blue prints of the following weeds and grasses: Pig weed, lamb's quarter, joint grass, purslane, ragweed, dog fennel, plantain (3 varieties), pepper grass, shepherd's purse, jimson weed.

"How did these weeds come to be in our garden? From seed. We did not plant them. Who did plant them? Some sowed themselves. The wind, birds, animals helped others. Suppose we try to find out how many seed are in one plant." The teacher pulled up a plant of shepherd's purse and gave a branch of it to each child. We counted the number of seed pods on each branch. We put the number down with a sharp stick on the ground and added. Then we counted the number of seed in one pod. "How many pods? How many seed in one pod? How shall we find out how many seed altogether? Multiply." We did so, and found that there were practically 4,000 seed on the one plant of shepherd's purse. "How many seed



A. A LESSON ON COTTON.



B. ON HIS OWN FARM.

made this plant? Only one. How many plants could come from this one? Four thousand. Don't you think we shall have to destroy every weed, if we wish to get rid of them entirely? If we destroy all of them this year, do you think it will help us next year? How?"

The teacher told the children that weeds and grass are sometimes friends after all. They make lazy farmers work their crop to get rid of them when they would not work it to keep a dust mulch.

The following reasons for cultivating corn were developed: (1) To form a dust mulch (*a*) in order that corn may get moisture and (*b*) that the soil will not lose the moisture; (2) to make soil loose and fine, that roots may get food and water; (3) to kill weeds and grass.

When the corn was about a foot high we fertilized with nitrate of soda. Care was taken not to get any on the plant.

We made a note of the time when the corn tasseled and examined the tassel carefully. In the same way we noted the time of silking and examined the silk closely. Having studied other flowers, the children knew that the two essential parts of the flower are the stamens and pistil. They had noticed pollen on the stamen of other flowers. "Where is the pollen on the corn? Can you guess what this part is? What are the two parts of a flower? Which part have you found? Now, who can find the other part? On what does pollen fall?" It took the children some time to discover that the silk is the pistil. "Now, can you give me a good reason for being careful to have a good stand of corn? Why should it all be of the same age?" We then cut silk from one ear of corn; on another we made the silk into a ball and then waited for results.

One dry day the children noticed that the leaves of the corn were curled up and, of course, thought the corn was dying. They were much relieved to find the leaves straight the next morning, but they curled again in the heat of the day. In answer to the children's questioning the teacher wet two cloths and hung one out smooth. The other she made into a roll. The children then watched to see which dried out first. They thus learned that the corn leaves lose their moisture too rapidly when spread out smoothly. The leaves protect themselves by curling up in the same way that the cloth did.

When the silks were dead on our corn, we pulled the husk down and found the corn ready to eat. "How long has it been since the corn tasseled? Since it silked? Since it was planted?" The children learned that at this stage corn is called "roasting ears." We gathered roasting ears to cook. We learned to tell when the corn was ready by noticing the silk and feeling it through the husk instead of pulling the husk down, because if corn is left unprotected the ants come and destroy it.

We pulled the two ears on which we had experimented with the silk. Neither was filled out. "What did we do to the first? Cut

the silk from it. What did we do to the second? Made the silk into a ball. Do you think, then, that the silk is an essential part of the corn?"

We now husked the corn that we had gathered. We followed the silk on one of the ears until we found the end attached to a grain of corn which was plump and round. The children knew that the pollen falling on the silk had something to do with it. They were told that a pollen grain must fall on each silk; that each silk is attached to one grain of corn, and that the pollen causes the grain of corn to develop.

We husked the corn and discussed the value of the husks or "shucks," as the children called them. They saw that the husks cover and protect the ear of corn. They learned that husks are used as food for animals; that they can be made into doormats, etc.

A stalk of corn was taken up carefully, roots and all. The soil was washed out at the pump. We noticed the large root system, with tiny roots reaching far into the ground. After discussing the kind of soil and the reason for shallow cultivation, we examined the parts closely, as follows:

PARTS OF PLANT.

1. Roots: (a) Kinds—fibrous, brace.
2. Stalk: Jointed; joints closer together near the roots. Why?
3. Leaves: Grow from joint, attached to lower joint, encircles stalk until it reaches next joint where it spreads out. Arranged for conducting water to the root of the plant. Shape is grasslike. Parallel veined. Margin of leaf fuller than rest of blade. Why? Do you think the parallel veining helps? Rough, covered with small hairs.
4. Tassel: Part of flower.
5. Silk: Other part of flower.
6. Fruit: Ear of corn. Covering, husk. Grains of corn borne on cob.

Later the process of cooking the corn was carefully gone through with by the teacher and children. After the corn had been cleaned of its husk and silk, the pupils pinched a grain of corn here and there with the finger nail until the milk came. Then they used iodine to test the corn for starch.

The corn was put in boiling water, and the children were told that the cooking time for corn was 20 minutes. The teacher had one of the children bring a clock, while another was instructed to watch the time and report when the time was up.

While the corn was cooking, the children discussed interesting points about corn—various uses of corn apart from eating; fodder; history of corn from Indian and Pilgrim times; Indian legend as to how the Indians first got corn ("Hiawatha's Fasting," by Longfellow); methods of grinding the corn, old and new, etc.

At Halloween we had the corn popped as part of the celebration, and we sang the Popcorn Song. From the corn shucks we made mats and baskets.

APPENDIX A.

DIARY OF THE FIRST TWO WEEKS OF SCHOOL.

September 19 to October 14, 1911.

Tuesday, September 19.

Children present representing the first three grades of school.

Visit the garden. Find peas sown in July for a cover crop rank and completely covering the ground. Find peanuts still green. Popcorn is mature and ready to harvest. Jessie and Carrie have had charge of the garden during the summer. They return the key to the teacher. Children who were in school last year take pride in showing the new children through the house and telling about the different rooms. After this all gather around the teacher on the veranda, and the children from last spring tell the new ones of the work they have done at school, of what was raised in the garden, of what was made in the carpenter shop, and of the good times in cooking and sewing. The new pupils are told that each of them is to have a garden. They are to work in the carpenter shop and are to cook and sew.

The children have been attracted by a crayon sketch of "The Three Bears" on the blackboard. The teacher tells them the story. Scissors are brought out, and the younger children set to work cutting the chairs, table, bowls, and beds for the bears. The older ones try to read to the teacher in the book brought from home. The teacher soon finds that this is impossible. A new beginning must be made. She decides to let the third grade pupils read in second reader. The older children and the teacher return to the children who are cutting the story of "The Three Bears." All notice the shape of the piece used to cut the chair, bed, table, etc. Teach them square and oblong. Find other squares and oblongs in the room. Get some idea of their ability to estimate length in inches. Mount cutting that children have done. They are very proud of their work.

Recess. Play "Hide and Seek" and "Drop the Handkerchief." Children eat their lunches. Return to veranda. Older children make a list of vegetables in the garden. Teacher gives reading lesson to beginners and those who must begin all over again. Teacher shows picture of baby. The children are all glad to tell of the baby at home and also of the mother there with the baby. They tell of tending the baby and how they love the baby. Develop sentences: Who loves baby most? Whom does baby love most? Mama loves baby. Baby loves mama.

Write these sentences on the blackboard many times. Beginners read easily. Children who have been attempting to use the book hesitate and try to read the sentences word by word. Teacher lets them look at sentence, then look at her and tell her what they saw. Look at sentence: erase quickly. What did you see? Chalk given to children. Children hold chalk and write in the air with teacher as she writes the sentence: "Mama loves baby." Repeat several times, then erase, and let children write sentence on blackboard.

The beginners follow directions more carefully than those who have been trying to write and succeed better. All are encouraged to try again, and the

sentence is again written on blackboard just as before, children writing in the air as the teacher writes on the blackboard. The sentence is erased and the children again attempt to write it. Finally, the two sentences presented are written carefully on the board by the teacher and allowed to remain. Correct work that advanced pupils have been doing and spell it as an oral spelling lesson.

Second day, September 20.

Teacher explains that there are household duties to be performed daily. These will be found written on blackboard in kitchen. Just now older ones may read for younger. Writes on blackboard:

Cut flowers	-----	Jessie.
Arrange flowers	-----	Mamie.
Dust	-----	Annie May.
Arrange books	-----	Johnny and Carrie.
Bring water	-----	Lawrence and Charlie.
Wash and hang out cups	-----	McIver and Nell.

Teacher shows pupils the drinking cups and explains that they are to be scalded, dried, and hung on numbered nails near the pump every morning. Duties done, all gather on the veranda. Teacher reads twenty-third Psalm, and the children begin to memorize it.

What shall we plant in our garden? Various things suggested. All who remember the beautiful sweet peas at the college are unanimous in their choice of them. Some suggest turnips. It is too late for turnips now. How about onions? Teacher shows onion sets. What are these? All the children know. What did we plant to get our tomatoes, turnips, etc., last spring? Seed. To get onions we plant sets. Jessie says her mother plants onion seed. Yes; teacher has some seed. Shows it to the children. When did Jessie's mother plant seed? In the spring. If we want our onions now we must plant sets. How do you suppose we got these sets? Bought them. Yes; but how did the seed man get them? What do they look like? Tiny onions. They really are. Seed planted close together in poor soil made these tiny onions which we call sets. Each child is allowed to examine a set. From which end will leaves come? From which end roots, etc.? Given clay and allowed to model onion. Feel your onion. Now feel your model. See that your model is just like your onion. Develop these words as children model: Onion, round, set, smooth, come, leaves, flat, roots, pointed, grew, sprout, skin, white, rings, green, germ, thin, thick. Let older children learn these as a spelling lesson. Younger continue modeling while older ones spell.

How many onions do you think there are in this bag? What do we use to measure onions? Find dry measures. Measure and find that we have two quarts of onions. Sometimes onions are sold by weight. Estimate weight; then weigh, and write weight on blackboard. Write number of quarts on blackboard. How shall we plant our onions? In rows. How far apart must the rows be, and how far apart must the onions be in the row? What will tell us how far apart? Size of plant. Think of size of different plants; compare with onion. Can put them closer together than any of these. How close? Finally decide that rows may be 1 foot apart and that sets may be 6 inches apart in the row. How wide is your garden? How long will your row be? Seven feet long. Find number of sets needed for one row in your garden. First find number of sets needed for 1 foot, then for 7 feet. After children have discovered this, teacher places these problems on the board for advanced children: If sets are put 4 inches apart, find number of sets in 1 foot; in 2 feet; in 3 feet; in 4 feet; in 5 feet; in 6 feet; in 7 feet.

If sets are put 3 inches apart, find number of sets in 1 foot; in 2 feet; in 3 feet; in 4 feet; in 5 feet; in 6 feet; in 7 feet.

Beginners read somewhat as they did the first day. They read the two sentences learned the day before and add to them:

Nell loves Baby
Nell loves Mamma
Mamma loves Nell
Baby loves Nell

Use in this way the names of several members of the class. Write without copy, just as was done yesterday, "Mamma loves Baby."

Correct number work of advanced children.

Recess. Try to play ball. Not enough large children. Play farmer. Eat lunches. Return to veranda.

Have children attempt to tell story of "Three Bears." Younger children want to cut story again. Teacher shows them how to cut "Big Bear," "Middle-sized Bear," and "Little Tiny Wee Bear," to put with furniture cut the day before. Advanced pupils read in third reader "The Hill Pasture."

Mount work done in cutting. Teacher tells story of Chick Tuppen.

Third day, September 21.

Children came to school laden with great bunches of goldenrod. They are put in our big brown jars. Duties found written on blackboard are done and school opened. All on the veranda. Teacher gives one verse of Helen Hunt Jackson's September:

The goldenrod is yellow;
The corn is turning brown;
The trees in apple orchards
With fruit are bending down.

Writes it on blackboard that older children may read it and copy it at their leisure.

We want to cook to-morrow. All of our utensils in the kitchen are soiled. They must be clean. Must know, too, what we have. All go to kitchen. Everything in cupboard and on shelves is washed, shelves are wiped off, table scoured, and everything made tidy. The work assigned to each is again written on blackboard. After this is done, fresh paper must be put on the shelves. Paper must fit. What must be done first? We must measure the shelves and then cut paper to fit. Advanced children, with sheets of paper, rulers, and pencils, set to work to get paper to fit shelves. Beginners read. Teach idiom, "I see." Give them many sentences containing the idiom:

I see Mamma. I see Baby. I see Nell. I see Jessie, etc., using names of children in the class. Then, by making simple drawings of a leaf, cup, ball, apple, etc., let them read:

I see a (leaf). I see a (cup). I see an (apple), etc.

Let each child whisper to teacher something he sees. Teacher writes "I see" on blackboard and draws the object. Child calls on another one to read what teacher has written.

For writing lesson write: "I see Mamma." Children tracing in air as teacher writes; then, after sentence is erased, writing on blackboard.

Older children have fitted the paper to the shelves and are ready for the teacher to look at it. She praises the neatest, most accurate ones. Then asks: How long is this shelf? How wide? How long is *this* shelf? How wide? If they have forgotten they measure again. Advanced children make inventory of cooking utensils and dishes used in serving. Look at inventories made by advanced children and correct the spelling. Tack correct ones on inside of cupboard door for reference.

Recess. Play games. Eat lunch.

Pick and shell peas ready to cook to-morrow. Count number of peas in pod as they are shelled.

Advanced children read in second reader. Review story of "The Three Bears." Repeat verse of September.

Fourth day, September 22.

Household duties done. School opened. Twenty-third Psalm and first verse of September repeated. Teacher writes on blackboard:

We are going to cook to-day.
We are going to cook peas.
The peas grew in our garden.
We picked the peas yesterday.
You may get the peas, McIver.

Children who can do so read. Older children in beginner's class try to get the words and enjoy the effort. McIver brings the peas. How many peas do you think we have? Measure. We have 1 quart and 1 pint. How do you cook peas? Directions written on blackboard. Three children work together. Put 1 quart of boiling water in sauce pan. Put in 1 slice of bacon. Wash $\frac{1}{2}$ pin of peas. Put them into saucepan. Boil for 2 hours. Add 1 teaspoon of salt. After peas are all safely on the fire to cook, the clock is brought. When will the peas be done? What time is it now? 9.30. Two hours from 9.30 is 11.30. John's duty is to tend the fire and see that the saucepans are kept boiling.

Advanced children given these problems:

6 peas	4 peas	7 peas
7 "	9 "	8 "
<u>+8</u> "	<u>+5</u> "	<u>+9</u> "

Beginners read. No new word is given, but a great many sentences are made with words already learned. A writing lesson is given as usual with the reading lesson. Correct number work of advanced pupils. Give older children in beginner's class some work in addition.

Get spray of peas—blossoms, leaves, pods. Let children draw and color with crayola. Develop these words: Vine, bloom, pod, hull, peas, leaves, stem, green, purple, brown, long, round, grows, runs.

Advanced children use these for spelling lesson. Continue ear training with beginners. Teach sound of *m*. Let children write it on blackboard, giving the sound audibly as they write.

It is 11.15. Peas will be done at 11.30. We must get our table ready for serving lunch. How many children? 11. Teacher makes 12. How shall we arrange our plates? You may all show me by drawing it on the blackboard. Decide to put five on each side and one at each end. How do you place the knives and forks? Knives on right. Forks on left. Which is your right hand? Which is your left? All show me your right hand. Show me your left, etc. Where shall we put the flowers?

Teacher then writes on blackboard:

Remove books and get table ready	Mamie.
Plates	Estelle.
Knives	McIver.
Forks	Charlie.
Chairs	Lawrence, Aggie.
Cut bread	Jessie.
Flowers	Nell.

Peas are served in bowls. When all is ready, lunch is announced by one child. He says: "Lunch is served." All take places at table. A simple grace is said. Children help each other to peas. Bread is passed. Some call this peas porridge. "The three bears" ate porridge. They left it to cool while they went for a walk. After the children have talked about the story of the three bears the teacher suggests that there is a rhyme about peas porridge. She begins to recite and children join in with her. Children are shown how to use fork properly, how to break their bread, and to eat slowly.

All enjoy the warm lunch. When all have finished, the teacher writes on blackboard.

Plates	-----	Charlie.
Forks	-----	Agnes.
Crumb table	-----	McIver.
Wash dishes	-----	Mamie.
Rinse	-----	Carrie.
Dry	-----	Johnny, Jessie, and Nell.
Put away dishes	-----	Rosa.
Wash tables	-----	Charlie.
Wash towels	-----	Annie, May, and Maggie.

Teacher resumes place at table. Gives signal for all to rise. All leave table in an orderly way. They go merrily to work and soon everything is in order again.

Teacher tells again the story of "The three bears" and an attempt is made to dramatize it.

Fifth day, September 25.

Find peculiar caterpillar on cotton. Put bunches of cotton with caterpillars clinging to them in terrarium. Find others on convenient limb of cotton and tie piece of mosquito netting securely around limb, thus caging caterpillars on the talk.

Household duties are performed. School opened. Another verse of September memorized.

Teacher wishes to teach children some games. Bean bags offer a variety of instruction and easily learned games that prove interesting to the oldest as well as to the youngest. She therefore decides that they must have bean bags. The children can make them for themselves. Get scraps of gingham from friends. Children bring some. Explain to children what is to be made. Draw plan on blackboard. What figure is this? Oblong. Review oblong. What is size of this oblong? 5 inches by 10 inches. Show me two sides. Two ends. How many corners? Kinds of corners? Length of one side? Length of two sides? Length of one side and one end? Length of one side and two ends? Length of two sides and two ends? Length all around the oblong? We call this the perimeter. What is the perimeter of your oblong? Draw figure as it will look when folded. What shape is it now? Square. What is the difference between square and an oblong? Take some time to get correct expression. Size of square? Number of sides? Kind of sides? Number of corners? Kind of corners? Length of one side? Length of two sides? Length of three sides? Length of four sides? Perimeter of square? One-half of perimeter.

All cut bean bags by measure from gingham. Peas are to be put into bag. Bag is first basted, then sewed. A little place must be left open to put in the peas. Decide that 2 inches is long enough. Develop these words:

bag,	thread,	short,	thread,
oblong,	needle,	small,	cut,
square,	stout,	tiny,	sew,
gingham,	strong,	little,	baste.
cloth,	even,	closely,	
scissors,	straight,	evenly,	

All baste. Advanced pupils copy words and learn to spell them. Beginners read. "Kitty" is a new word. Old words combined in sentences with the new word kitty. Write, as usual, "I see kitty." Let advanced children spell orally words copied. Teacher takes a short walk with children. Notice signs of fall—goldenrod, aster, and other fall flowers. Notice the butterflies and grasshoppers. Sees a woodpecker and a mockingbird. Children eat lunch. Gather on veranda for social period. Teacher tells story of "Goldenrod and aster." Shows silhouette pictures in plan book. All recite "September," "Jack and Jill," "Polly put the kettle on," etc. Advanced children are assigned work in addition in Milne's Arithmetic No. 1. With beginners continue the ear training and teach the sound of *s*. Review sound of *m*. Write both on blackboard, sounding each softly, as written. Correct work of advanced pupils in arithmetic. Children wish to use their spelling book. They are allowed to study the first lesson.

Beginners try to cut the story of "Golden Rod and Aster" from picture in the plan book. Advanced pupils write spelling on blackboard. Words very simple. None misspelled. This class reads in second reader.

Sixth day, September 26.

Caterpillars playing havoc with cotton; they have eaten nearly every leaf. Caterpillars are growing and changing color. Our household duties are done. School opened. Children repeat in concert twenty-third Psalm. Repeat "September" in the same way.

Speak of things seen on excursion that we took Saturday. Birds are mentioned. How many have seen birds closely? What are some of the parts of a bird? What is general shape of body? Of the head? How is the head joined to body? Why is neck curved? Eyes—where placed? Nose and ears? We shall try to see whether a bird has any. Wings—correspond to which parts of your body? Legs—how placed? Toes—why are they so arranged? Which birds walk around and which hop? Covering of birds. Advantage of feathers—warm, light, can fit closely to body or spread into fan shape. Kinds of feathers—use of each kind. Use of tail? Does shape of body help bird to fly? In flying what does bird do with his feet? Can you tell now why they are placed as they are? Bones of bird—light, cavities filled with air. Do bones help bird to fly? Name everything that helps bird to fly. General shape of body head so shaped and placed as to steer in flight, wings are to propel, tail is to direct the course of the bird, feathers soft, light, close-fitting, feet can be drawn up close to the body so as not to interfere with flight of birds, bones are light and contain cavities filled with air.

Food of birds. How many know how chickens eat? No teeth. Food passes into crop. Ground in gizzard by small stones that the chicken has swallowed. We shall watch all the birds we see and try to find out what they eat. We know a bird eats grain. One reason for his having a hard pointed bill instead of a soft mouth like ours. Words learned:

head	feet	long
body	toes	weak
bill	crop	spreading
eyes	stones	flies
ears	round	eats
nose	pointed	sings
neck	hard	hops
feathers	curved	walks
wings	light	grinds
tail	soft	spread
legs	two	

Beginners learn action word *hop*. Commands Hop, Nell; Hop, Agnes, etc., written on blackboard for children to read silently and then perform the action. Writing lesson given in connection with reading lesson as usual. Ear training continued. New sound *h*.

Older children drilled in rapid addition and subtraction. Beginners shown 1-inch, 2-inch, 3-inch, 4-inch, 5-inch sticks and work given them in number, using them as illustrations. For example: Show me the 1-inch stick. Show me the 2-inch stick. Compare them. Show me the 3-inch stick. Compare with 1-inch stick and 2-inch stick, and so on with each stick, comparing with the ones previously used. Review stories and poem. Older pupils read in second reader.

Seventh day, September 27.

Household duties done as usual. School opened. Caterpillars examined. Study woodpecker. Have had preliminary study of birds the day before. Notice particularly coloring, bill, wings, tail, and formation of toes. Children pleased to learn how woodpecker can balance himself so well when he pecks. Why does he peck tree, telephone post, etc.? For food. To make a place for his nest. Learn from bird book how nest is made and number and appearance of eggs. Words developed are:

woodpecker	hole	four
head	worms	two
bill	insects	front
tongue	trees	back
neck	posts	harmful
body	poles	braces
wings	red	pecks
tail	black	flies
legs	white	calls
toes	sharp	eats
nails	long	covered
feathers	slender	
eggs	stiff	

Teacher reads "Myth of Woodpecker" from Cooke's Nature Myths and Stories. She shows picture of woodpecker.

Advanced children draw and color woodpecker from this picture. Beginners read. Action words *run* and *jump* are taught. As the sentences, Hop, Nell! Jump, Mary! are written on the blackboard, the children perform the actions. Many commands are written, the name of each child in the class being used several times. Then write on blackboard: Run, run, run! Jump, jump, jump! Hop, hop, hop! See Lawrence hop! See Annie May run! See McIver run and jump, etc. For writing, let children write commands on blackboard for classmates to perform. They write the command and then call the name of the one they wish to perform the action. Some of these attempt to draw the woodpeckers. Others sew on bean bags. Older children have a lesson in arithmetic. Reading lesson in second reader. Spelling lesson No. 2 in Progressive Speller, and words developed in lesson on woodpecker. Beginners given quick drill in recognizing various lengths, using 1-inch, 2-inch, 3-inch, 4-inch, and 5-inch sticks.

Teacher writes on blackboard: "We are going to cook to-morrow. We are going to cook some of our peanuts. Come with me to the garden. Pull up peanuts, sit in shade of tree, and pick them off."

Eighth day, September 28.

Who remembers what we are going to do to-day? Teacher writes, You may get the peanuts, Mamie. Suppose we measure them. What measure shall we use? Dry measure. After peanuts are measured, we decide how they are to be cooked. New peanuts are better boiled. Must be cooked thoroughly. Will cook them all together in one vessel, as it is hard to keep all parts of stove hot enough to keep a vessel boiling. Wash peanuts and put them to boil. Put in 2 tablespoons of salt. Why do we put it in at first? Has to go through hull of peanut.

Growing peanut vine brought into house. Examine bloom; examine peanut. Bloom above ground; peanut below ground. How does this happen? Find elongated pistil of peanut ready to pierce ground. Have made a great discovery. After flower is fertilized, the stem bearing little peanut becomes long, goes down into ground, and the peanut is formed under ground. In what kind of soil should the peanut be planted? Teacher then tells children where peanuts are raised and something of harvesting them and their preparation for market.

Advanced pupils have arithmetic from their book.

Beginners. *Can* is the new word. Teacher writes a command on blackboard, and after child has performed it writes for him to read: I can run, hop, or jump, to suit the command given. She then writes: Can baby run? Can baby see mama? See mama, baby. Baby can see mama. Baby loves mama, etc. Writing lesson, I can see. Mother Goose rhyme is taught:

Jack be nimble,
Jack be quick,
Jack jump over the candlestick.

It is written on blackboard. Teacher teaches them a tune for it. Act it as they sing. Cut the story with paper and scissors. Phonics, sound of *f*. Advanced children read in second reader and spell in Progressive Speller.

Social period. Review stories learned. Peanuts given them to take home, with instructions to ask mother before they eat them.

Ninth day, September 29.

Bean bags are finished. Put 1 pound of beans in each bag. Sew up the opening that was left in the bag. Draw concentric circles on floor of veranda with chalk. Number circles. Each child allowed three throws. Puts score made on blackboard. Adds number of points made. One gets largest number wins game. Another game. Divide school into sides. Each child throws once. Score kept on blackboard. Side making largest score wins the game. All enjoy game and do not know they have been having an arithmetic lesson. Advanced class do some work in Milne's Arithmetic.

Beginners read. General review of everything already learned. Four pages of chart made by teacher are learned.

Recess. Children play with bean bags.

Reading lesson:

Polly put the kettle on,
Polly put the kettle on,
Polly put the kettle on,
We'll all take tea.

Read it, sing it, cut picture suggested by it. "Jack-be-nimble" reviewed: Phonics—new sound, hard *c*.

Advanced pupils read in second reader and spell in Progressive Speller, No. 1. Social period: Each child gives a Mother Goose rhyme story or riddle. Teacher tells the story of "The Fox and the Bumblebee."

Tenth day, September 30.

Caterpillars everywhere, crawling in every direction on the porch and even in the rooms. Every leaf of the cotton has been eaten and even the squares and bolls have been devoured. Our household duties are done and school opened. Some of the caterpillars are placed on the table for study. Appearance—hairy, green, with black dots on a yellow line. How does the caterpillar crawl? Like a measuring worm. Notice and see if you can tell why this is. Has no legs in front. When did we first find the caterpillar? How did it look then? How does it look now? A few caterpillars are put in different receptacles to develop into cocoons.

Make a note of the cotton caterpillar in our "Book of Bugs." Date on which we first noticed the caterpillars? September 25. What is to-morrow? October. Write the names of the two months on blackboard. What season of the year is it? Fall. Name the third fall month: November. Say the three fall months with me. What kind of weather are we having? What part of the day makes you think of summer? What part of winter? Name all the seasons. How many are there? Name all the months of the year. Teacher writes names of seasons and months on blackboard and leaves it for spelling lesson for advanced pupils.

A game of bean bag is again played. The advanced ones keep the score. A drill in rapid addition is given them. Advanced pupils do work in arithmetic.

Reading for beginners. Two new words, *big*, *little*. Baby is little. Kitty is little. Mama is big. Mrs. Browne is big. Nell is little. Charlie is little. Agnes is little. I see a little kitty. I see a big (picture of ball in drawn). Phonics—review sounds previously taught and teach sound of *p*.

Recess. More bean-bag games. Eat lunches.

Social period. Memorize entire poem "September." Story of "The Fox and the Grapes." Older children write the story. They read in second reader. Do some work in Milne's Arithmetic, and have a spelling lesson in the Progressive Speller, No. 1.

APPENDIX B.

REPORT OF FIRST MONTH'S WORK.

September 19 to October 14.

First and advanced grades.

Arithmetic. Learned to count and write numbers from 1 to 10. Have had addition and subtraction of numbers from 1 to 10. Learned expressions horizontal and vertical; square and oblong. Learned to use foot rule, to find one-half and one-fourth of foot. Used liquid and dry measures.

Reading. First-grade children have learned about 20 words. First advanced grade has had about 75 words. Both classes read from a chart made at school and read Mother Goose Rhymes written on blackboard.

Phonics. Learned sounds of all the principal consonants. Have combined them with short vowel sounds.

Nature study and literature, etc., was the same for all.

Third grade.

Reading. Found third reader difficult, so have used the second reader.

Arithmetic. Milne's Arithmetic, No. 1, covered first 30 pages.

Language. Kept records in Garden Book and in Book of Bugs. Reproduction stories: "The Fox and the Grapes," "The Fox and the Crow," "The Hare and the Tortoise," "The Sleeping Apple," "Goldenrod and Aster."

Spelling. Progressive course in Spelling Book, No. 1. Have covered the first 15 pages.

Literature for all. Studied and dramatized "The Three Bears," "Chicken Little," and "The Goats in the Turnip Field." Have read and told other stories for recreation. Poems learned: H. H. Jackson's "September" and "October," "October's Party," part of Longfellow's "Hiawatha," and "Mother Goose Rhymes."

Nature study for all. Cotton caterpillar and the caterpillar found on violets and the one found on oak trees. Studied the downy and red-headed woodpeckers and the flicker. Learned the names and habits of some of the fall flowers, goldenrod, aster, and wild carrot. Made a complete study of the apple.

Agriculture for all. Harvested corn and peanuts.

Cooking. Boiled peanuts and cooked peas.

Sewing. Made bean bags.

AGRICULTURE AND RURAL LIFE DAY

MATERIAL FOR ITS OBSERVANCE

By EUGENE C. BROOKS

PROFESSOR OF EDUCATION, TRINITY COLLEGE
DURHAM, N. C.



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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 3, 1913.

SIR: In several States one day in the fall of the year is set apart as "Agriculture and Rural-Life Day," to be observed in the schools in such way as to emphasize the importance of agriculture to the nation and to the world of mankind, to call attention to the worth and worthiness of the tillage of the soil, the cultivation of plants, and the breeding and care of animals as an occupation and profession, and to reveal something of the beauty and glory of simple and sane life in the open country. In other States exercises appropriate to this purpose are held in connection with Arbor Day, Thanksgiving, or the Harvest Home celebration. Those who know children best will appreciate most fully the possibilities of this day and the importance of making its program both interesting and instructive. The manuscript transmitted herewith contains material selected and arranged for that purpose. I recommend that it be published as a bulletin of the Bureau of Education. That this should be done is all the more appropriate since in many places this day has been set apart for this purpose at the suggestion of this bureau.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

To the SECRETARY OF THE INTERIOR.

THE COUNTRY BOY'S CREED

I believe that the Country, which God made, is more beautiful than the City, which man made; that life out-of-doors and in touch with the earth is the natural life of man. I believe that work is work wherever we find it, but that work with Nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do, but on how you do it; that opportunity comes to a boy on the farm as often as to a boy in the city; that life is larger and freer and happier on the farm than in the town; that my success depends not upon my location, but upon myself—not upon my dreams, but upon what I actually do—not upon luck, but upon pluck. I believe in working when you work, and in playing when you play, and in giving and demanding a square deal in every act of life.

EDWIN OSGOOD GROVER.

THE FOOTPATH TO PEACE

To be glad of life, because it gives you the chance to love and to work and to play and to look up at the stars; to be satisfied with your possessions, but not contented with yourself until you have made the best of them; to despise nothing in the world except falsehood and meanness, and to fear nothing except cowardice; to be governed by your admirations rather than by your disgusts; to covet nothing that is your neighbor's except his kindness of heart and gentleness of manners; to think seldom of your enemies, often of your friends, and every day of Christ; and to spend as much time as you can, with body and with spirit, in God's out-of-doors. These are little guideposts on the footpath to peace.

HENRY VAN DYKE.

AGRICULTURE AND RURAL LIFE DAY.

PART I. MAN'S STRUGGLE FOR FOOD.

MAN AND NATURE.

The history of our agricultural developments illustrates this principle—that enlightenment is increased by inventions and discoveries, which in turn create new industrial problems that call for still other inventions and discoveries. Thus man is ever modifying or changing his environment, while the environment is ever modifying or changing the habits of man. The intelligence of man and the forces of nature are acting and reacting on each other, while the race is working upward, always passing into higher and clearer intellectual zones, where many phenomena, once mysteries, are made plain, and new forces are brought into service for the advancement of the race. Moreover, as the arts of life have unfolded, man has become more open-minded to natural causes. He has learned to adjust himself more readily to the forces of the world about him, to work in harmony with them, and to adopt for his own use many things in the natural world which were once thought to be useless or harmful. The world has practically been made over in the past hundred years. New sciences have been evolved that have given a new meaning to life. New occupations have been opened up, making it easier for men of different talents to provide an honest living. New subjects have been added from time to time to our school curriculum, until the whole purpose of education has undergone a complete change. New foods for man, beast, and plant have been discovered, and ancient food plants have been so influenced, and their habits have been so changed, that they bring forth an hundredfold more than they did in their original state. These are some of the results of man and nature working together in harmony.

—Selected from Brooks' "Story of Cotton."

HOW NATIONS HAVE FOUGHT FOR LAND.

Man can not live without food, and the great wars of the world have been in the main wars of conquests for new territory, new river valleys, or fertile plains where the cereals grow and where the

starving multitude may receive food in plenty. It is an interesting fact that civilization had its birth in the great river valleys of the world, and the great nations of the world have been those that controlled the rich food-producing lands.

We have only a few records of a great civilization that once lived in the Euphrates Valley, where Babylon and Nineveh contended with one another, and where, it is said, the wheat of the world had its origin.

From this very ancient beginning nations have followed one another in rapid succession, each one contesting for the great valleys, only to be soon captured and destroyed by a more vigorous people. Jacob's sons, driven by hunger, went down into the valley of the Nile begging for food. Their descendants, more than a million strong, having been held captive by the more powerful Egyptians, broke away from their captors and reoccupied the valley of the Jordan—the land of Canaan. Thence came our first lesson in careful food selection and preparation.

The overcrowded Greeks colonized the fertile districts along the shores of the Mediterranean. The Romans went to war with the Carthaginians for the great grain fields of Sicily, and finally annexed the Nile Valley to their great empire. The congested tribes along and beyond the Danube pressed down into the fertile valleys of Italy, France, and Spain and overcame the Romans. Wanderers from the cold north and from across the Rhine overcame northern France, England, Scotland, and Ireland. Several centuries later a way was found to America, and the natives of Europe pushed their underfed population over into America and took from the Indians the fertile valleys along the coast. And when the coastal plain was settled and all the river bottoms taken up the population still pushed westward, fighting the Indian and the bear until the fertile valleys of the Mississippi and its tributaries were revealed. It took only about a century for the valley to become occupied and its products to find their way into the markets of the world. But the struggle for river valleys did not stop. During the past half century another great valley was discovered—the La Plata of South America—and the grain of this great valley feeds millions of Europeans, who would be hungry without it.

THE STRUGGLE FOR FOOD.

The first instinct of every being is to secure food for the nourishment of its body. The moment any living thing appears in the world it begins to feel about for food. The infant animal makes its wants known by its movements, and the little plant begins to send its tiny rootlets around in the soil. The body is extremely sensitive

to the pangs of hunger and responds more readily to its call than to any other stimulus. When the body is insufficiently nourished, both the mind and body become abnormal; the child in the schoolroom is unable to respond to the demands of the teacher; the statesman is unable to hold firmly the reins of government; and the worker in the fields, in the store, or in the factory is unable to render efficient service. When the weakening organs begin to call for support and the life currents begin to draw heavily on the stored up energy of the body, all the native habits of the individual are greatly exaggerated or undergo a sudden change. Upon the lower animals, whether it be the worm of the earth or the lord of the forest, the effect is the same. Among the races of men the instinct is identical in the most beastly cannibal that feeds on the captives of war and in the most exalted ruler of nations. Hunger takes away a mother's love and drives her to devour her own child. It fills the slums of our cities with thieves and thugs, nullifies all laws, and destroys all order. It turns men into demons. The feeding instinct is the great motive power that drives all life and that makes all living things active.

ANCIENT KNOWLEDGE OF COOKING.

It has ever required great skill to convert the corn of a country into a wholesome food. Bread is very ancient in its origin, and baking is older than history itself. Man learned from experience that bread supports life better than any other single food except milk, and thought was devoted to its preparation, even in the very earliest times.

Sarah, the venerable wife of Abraham, knew well how to mix flour and water into a shapely pone, which she baked in hot ashes in her tent. The most ancient Egyptian knew how to make a light, wholesome bread, which they called "leavened bread"; and the Hebrews carried the art with them into Palestine. The Greeks enjoyed a mixture of flour, wine, pepper, oil, and milk, and the ladies of Greece delighted their friends with puff cakes of exquisitely perfumed flour kneaded with the precious honey of Mount Hymettus. The Roman patrician ate bread made by mixing flour, salt, oil, and milk. When the white man came to America, the Indian taught him to make an ashcake from Indian corn. Not only has the world been studying breadmaking since the earliest recorded time, but, as time advanced, the real differences in the value of foods were observed. Many centuries before the Christian era Moses taught his people the superiority of clean over unclean food. The Greeks, clever students of life and of living, studied the influence of food on the mind and body, and to this day the world is the better because of their wisdom.

ANCIENT USE OF VEGETABLES

It was a belief of the Cherokee Indians that all disease came from animals, but that plants contain a cure for every ill which beasts brought to man. Many vegetable foods found on our tables first came into use as medicinal plants, and it is probable that the majority of them thus originated. The cabbage was once regarded as a remedy for drunkenness and various diseases. The Greeks thought asparagus a good remedy for intestinal trouble, and that the beet had very fine medicinal qualities. The cucumber was supposed to have all sorts of healing properties, and lettuce, the favorite plant of Adonis, according to their ideas, possessed narcotic virtues. Garlic incited warriors to courage, and was avoided in time of peace. Parsley excited the brain to agreeable sensation; water cresses gave a very refreshing effect, and onions were good for preserving the health. Hyssop renewed and purified the blood, thyme was an antidote to the venom of a serpent; pennyroyal was taken to facilitate digestion, mint prevented milk from curdling, ginger was a cure for scurvy, and asafetida was in ancient times the chief seasoning for food, since it was supposed to promote digestion. All these vegetables were in use long before the Christian era. In fact, it is impossible to go back to a time when they were not in use. Patroclus probably peeled onions; Achilles washed cabbage; and many centuries before the Trojan war the chief baker for Pharaoh fell into disrepute, probably because of the poor bread that he served.

THE BREAD OF THE WORLD.

It has been well said that the quality of bread made by the inhabitants of any country is a fair measure of their civilization. Of all the cooking processes now in use by civilized man, the cooking of bread is the most important. The kind of bread that is used in any country has always depended upon the kind of corn or grain or food-giving plants found in that country.

Wheat bread is probably the most widely used in the world's history, because wheat is indigenous in the most fertile valleys of the Old World and could be easily produced in those countries in which it is not indigenous. *Rye bread* is next in importance, and, though it has not had such long continuous use as wheat, it is used extensively, especially in Germany, France, Spain, and Greece. *Buckwheat*, or black wheat, is the staple bread flour in Russia, Siberia, and Brittany. *Soya bread* is eaten in some places, especially by the inhabitants of China and Japan. It is made from an oily pea that is native to those countries. *Millet flour* produces a wholesome bread that is eaten by the inhabitants of India, China, Egypt, Italy,

Spain, and Portugal. *Rice* constitutes the staple food of a majority of the inhabitants of the world; it is eaten less in America than elsewhere. *Barley bread* was an ancient food of note, but it is not used now to any great extent except in portions of Russia. *Oats* was originally the grain food of Europe. It has been eaten in Germany for 1,000 years, but it is eaten to-day more in Scotland than in any other country. *Arrowroot flour* is derived from a tropical plant grown in both East and West Indies, and when made into a bread is eaten by the inhabitants of these countries. *Tapioca flour* makes a wholesome bread that is eaten by the inhabitants of Central and South America. The flour is made from the roots of the plant. It is becoming popular in Europe and America. *Sago* is derived from the pith found in the stem of several varieties of the palm in Sumatra, Java, and Borneo, and makes wholesome bread for the people of those and adjoining islands. *Iceland moss* also is used as a food. The Eskimos purify it by washing, and then make a fine flour of it that is easily made into a bread. *Indian corn*, or *maize*, was the chief bread plant of American Indians. In Mexico it is still the principal food, and the cakes made of it are called *tortillos*. In Italy it is called *polenta*; in Roumania, *mamaliga*, and in Transcaucasia, *kukurus*. In North America it is made into corn pone, johnnycake, ash cake, griddle bread, and corn bread.

Rise of the baker.—The preparation of food for the dignitaries of the world has always been an important matter. You will recall that when Joseph was serving in the house of Potiphar he was cast into prison. Later the royal baker offended his lord, the king, and was cast into prison, where he had a dream which Joseph interpreted. His dream is interesting. "Behold, I had three white baskets on my head, and in the uppermost basket there was all manner of baked meats for Pharaoh." But in his dream he let the birds pick the food and it foretold his doom. The Hebrews on leaving Egypt took with them their knowledge of breadmaking, but they discarded the leavened bread of Egypt and made specific regulations concerning the preparation of bread in "the ovens and in the frying pans."

The baker, however, became an important person when the people stopped their tribal wanderings and settled down to fixed ways of living. Greece had the most skillful bakers in the world. From that country they went to Rome, and the Greek baker, like the Greek school-teacher, became an important person. It is a significant fact that he who could prepare food after the most approved manner for those who followed intellectual pursuits held almost equal honor with him who trained the intellect of the youth. The bakers of Rome formed an association, and sometimes one of them was raised to the dignity of senator.

In the fourteenth century a baker was required to go through a four years' apprenticeship, after which he was licensed to pursue his occupation. Bread was supposed to contain properties according to its mixture and preparation. Hence the baker's art was important. Different kinds of bread were prepared for different people. The slave had a special kind that would keep him humble and submissive; the athlete another kind that would make him strong and supple; princes and senators another kind, and fashionable ladies still another kind. Each kind was expected to give to the individual eating it a character appropriate to his station in life.

—Selected from Brooks' "Story of Corn."

THE PLOWMAN.

Clear the brown path, to meet his coulter's gleam !
Lo ! on he comes, behind his smoking team,
With toil's bright dewdrops on his sunburnt brow,
The lord of earth, the hero of the plow !

First in the field before the reddening sun,
Last in the shadows when the day is done,
Line after line, along the bursting sod,
Marks the broad acres where his feet have trod ;

Still, where he treads, the stubborn clods divide,
The smooth, fresh furrow opens deep and wide ;
Matted and dense the tangled turf upheaves,
Mellow and dark the ridgy cornfield cleaves ;

Up the steep hillside, where the laboring train
Slants the long track that scores the level plain ;
Through the moist valley, clogged with oozing clay,
The patient convoy breaks its destined way ;

At every turn the loosening chains resound,
The swinging plowshare circles glistening round,
Till the wide field one billowy waste appears,
And wearied hands unbind the panting steers.

These are the hands whose sturdy labor brings
The peasant's food, the golden pomp of kings ;
This is the page whose letters shall be seen
Changed by the sun to words of living green ;

This is the scholar whose immortal pen
Spells the first lesson hunger taught to men ;
These are the lines which heaven-commanded Toil
Shows on his deed—the charter of the soil !

—OLIVER WENDELL HOLMES.

God Almighty first planted a garden; and indeed it is the purest of human pleasures. It is the greatest refreshment to the spirits of man, without which buildings and palaces are but gross handiworks; and a man shall ever see that when ages grow to civility and elegancy, men come to build stately, sooner than to garden finely, as if gardening were the greater perfection.

—FRANCIS BACON.

THE SOWER'S SONG.

Now hands to seed-sheet, boys!

We step and we cast; old Time's on wing;
And would we partake of harvest's joys,

The corn must be sown in spring.

Fall gently and still, good corn,

Lie warm in thy earthy bed;

And stand so yellow some morn,

For beast and man must be fed.

Old earth is a pleasure to see

In sunshiny cloak of red and green;

The furrow lies fresh; this year will be

As years that are past have been.

Fall gently and still, good corn,

Lie warm in thy earthy bed;

And stand so yellow some morn,

For beast and man must be fed.

Old earth, receive this corn,

The son of six thousand golden sires;

All these on thy kindly breast were born;

One more thy poor child requires.

Fall gently and still, good corn,

Lie warm in thy earthy bed,

And stand so yellow some morn,

For beast and man must be fed.

Now steady and sure again,

And measure of stroke and step we keep;

Thus up and down we cast our grain;

Sow well and you gladly reap.

Fall gently and still, good corn,

Lie warm in thy earthy bed;

And stand so yellow some morn,

For beast and man must be fed.

—THOMAS CARLYLE.

And I must work thro' months of toil,

And years of cultivation,

Upon my proper patch of soil

To grow my own plantation.

I'll take the showers as they fall,

I will not vex my bosom:

Enough if at the end of all

A little garden blossom.

—ALFRED TENNYSON.

I've plucked the berry from the bush, the brown nut from the tree,
But heart of happy little bird ne'er broken was by me.
I passed them by, and blessed them all; I felt that it was good
To leave unmoved the creatures small whose home was in the wood.

—WILLIAM MOTHERWELL.

AFTER THE RAIN.

The cock is crowing,
The stream is flowing,
The small birds twitter,
The lake doth glitter,
The green field sleeps in the sun;
The oldest and youngest
Are at work with the strongest;
The cattle are grazing,
Their heads never raising;
There are forty feeding like one!

Like an army defeated
The snow hath retreated,
And now doth fare ill
On the top of the bare hill;
The ploughboy is whooping—anon—anon:
There's joy in the mountains;
There's life in the fountains;
Small clouds are sailing,
Blue sky prevailing;
The rain is over and gone!

—WILLIAM WORDSWORTH.

PART II. THE APPLICATION OF SCIENCE TO AGRICULTURE.

THE MYSTERIES OF MOTHER EARTH.

It has ever been a mystery how seed go down into the darkness of the earth and come back again in the form of new life. Ages ago this mysterious underworld, with its strange and inexplicable processes, excited the profoundest awe and reverence in the inhabitants of the world. "The earth is the mother of all, and the stones are her bones," said the ancients.

Families, tribes, and nations moved about on the surface of the earth and engaged in fierce struggles for the necessities of life, which came from this underworld of the soil. Yet in the soil and subsoil, about which man knows so little even to-day, there is always going on a struggle equally as fierce. This world of darkness is, and ever has been, teeming with life. Roots and rootlets, the great laborers of the plant world, go creeping about through the soil and on down into the subsoil, contending with one another in a perpetual struggle for existence, silent but inexorable. Ever working in and through the very texture of the earth's surface, millions of living things, always busy and always keeping the particles in motion, furnish life for the things that grow above.

The problem with which the world has been struggling for ages is to establish a harmony between the things that live on the surface and the things that live beneath the surface of mother earth. Man has learned much of the habits of people and the principles of government, and of the value of the plant world and the dependence of man upon plants, but little has been learned of this strange world beneath our feet, from which growing plants spring and from which they derive a great part of their sustenance. We do know to-day, however, that there are certain fundamental laws that control the habits of this life of the darkness.

The world has suffered untold miseries because of its ignorance of the soil. Famine, pestilence, and even destructive wars and slavery have been some of the results, direct or indirect, of this ignorance, during the long centuries through which the race has come. But from age to age, these dire calamities have made their visits to man and have punished him sorely because of his ignorance and blindness.

—Selected from Brooks' "Story of Cotton."

THE ORIGIN OF FOOD PLANTS.

Nearly all our vegetable foods have been developed from five original plants. One of these was a kind of grass, another bore its weeds in pods, the richness of the third was in its roots, the fourth surrounded its seeds with a fleshy or pulpy growth, and the fifth had spreading leaves.

The seeds of the grass were developed by cultivation till they became what we now call grain. This process gave us wheat, barley, Indian corn, rye, rice, millet, and buckwheat. The same grass plant was cultivated in another way, so as to make its stalks luscious and juicy, with the result that there finally evolved timothy, blue-grasses, and other forage crops. So it is that both man and man's animals are fed by descendants of the same original plant.

But grass was cultivated in still a third way, to make its stalks stiff and woodlike, and this gave us bamboo.

From the plants which bore their seeds in pods, the farmers have developed clover, alfalfa, lentils, beans, peas, and other legumes.

The root plant gave us the onion, the beet, the turnip, carrot, parsnip, and sweet potato. The white potato is not a root, but a thickening of the plant's underground stem, which is called a tuber. The peanut is neither a root nor a tuber, but a seed, which the plant ripens underground instead of in the sunshine.

The plant which surrounded its seeds with a fleshy covering was the first parent of all the hundreds of fruits and berries which we now enjoy; while the leafy plant gave us cabbage, celery, lettuce, asparagus, spinach, chicory, and tea.

THE FARMER'S VICTORY.

In the agriculture of the future the preventive medical treatment of plants will be an important factor. The country suffers a loss from insect pests amounting to a billion dollars a year. These puny invaders are costing this country more every year than the total expenses of the United States Government, including the Army, the Navy, the post office, and Federal pensions. In the South there are the boll weevil consuming the cotton crops, and the cattle tick giving the live stock a fever from which they die; in the West there is the Hessian fly attacking the wheat; in New England the brown-tail moth and the gypsy moth are ruining trees without number; and everywhere there are the San Jose scale and the codling moth, whose unconsidered ravages in our fruit orchards entail a greater loss annually than that which was suffered by the loss of the splendid *Titanic* with all her cargo.

Steadily and surely the Government is overcoming these marauders upon our prosperity. It is now possible to grow cotton that is weevil proof; fruit trees can be saved by a wash discovered by the scientists of the Department of Agriculture; the southern cattle infected with the tick and the New England timber to which cling the brown-tail and the gypsy moth alike are quarantined from other parts of the country. So the war goes on, with victory sure to rest with mankind at last.

EFFECT OF INVENTION ON AGRICULTURE.

It is to improve farm tools that manufacture may thank agriculture for the present large number of workers which she has borrowed from her older sister. In the beginning man's plow was only a forked stick; he sowed by hand, harrowed by dragging a piece of brush over his field, weeded, when he weeded at all, with a shell, or perhaps with no tools at all, using only his bare hands. At the beginning of historic times, the Egyptians were using a bent piece of heavy timber drawn by oxen. Later the point of this plowshare was shod with iron. The Romans further improved the plow by joining two pieces of timber at the ends to form an acute angle, and they covered the angle with the iron. This was the first real plow; and it was the only plow known to Europe for almost 2,000 years.

Finally, the Dutch made another advance, when they curved the moldboard, the part of the plow which turns over the furrow, so as to make the furrow wider. The Dutch also made the beam by which the plow is drawn and added the two handles by which the plowman guides his implement. Modern farming began at that time, about 1725.

To-day, the great western farmers use a machine driven by a 100-horsepower engine, which plows, sows, and harrows at the same time a strip 30 feet wide at the rate of 3 or 4 miles an hour, covering more than 100 acres a day, and doing the work of 50 men with teams. This great mechanism would have been impossible without the earlier discoveries of the humble Dutch peasants.

Since the invention of the modern plow, the most important machine yet devised for the liberation of the farmer from hand toil is the reaper. This machine is as important to us as the cotton gin, for while the latter has made cotton planting profitable and has also given us cheap clothes, the reaper has insured us against famine and at the same time has made the farmer's labor so much more effective that agriculture can spare us enough help to man our mills.

With all the improvements in plows and in mechanical seeders, their efficiency was limited by the fact that the crops had to be reaped by hand, and that, too, within a space of 10 to 15 days. Hence the hand labor necessary to one part of harvesting was limiting the amount of work which man's mechanical helpers could do for him in all the other parts of the cropping process. Inventors put their minds to work; British devices were improved by Americans, till to-day we have the harvester, which reaps the grain, thrashes it, and binds it into sheaves, doing all its work automatically. The amount of labor saved by this machine is enormous.

If we had to harvest our wheat by hand, it would take half the men of the nation for that crop alone. Five men, with this reaper, can now do as much as 100 men with scythes. The reaper enables us to raise more wheat than Russia, whose population is larger than ours; and at the same time we can maintain a larger proportion of people in the cities than Russia can. It is the harvester which has made the difference.

So, with the improved plow, the harvester, and the other modern agricultural machinery, the amount of labor required to raise a bushel of wheat has been shortened from 3 hours to 10 minutes. The men no longer needed on the farms are employed in our factories and mines, making us as great a nation commercially as we are agriculturally. And so it is that improved farm machinery is one very important cause of our industrial supremacy.

WHAT AMERICAN INVENTORS HAVE DONE FOR THE FARMER.

In the days when all work about the farm was performed by hand labor and hand tools, 90 per cent of the people had to live on the soil, for not more than 1 man out of 10 could be spared from the work of raising food. Nowadays, six men, with enough land and all modern appliances, can raise enough food to maintain a thousand people. It is the glory of America that nearly all the modern appliances making this result possible were the inventions of Americans.

First of all, an American preserved for the world an entire staple crop, together with the industry dependent upon it. This inventor was Eli Whitney (1765-1825), who produced the gin by which cotton is cleaned of its seeds. At the time Whitney perfected this machine cotton planting was dying out, owing to the fact that it had to be cleaned by hand, and as one man could pick the seeds from only about a pound a day, the labor made its cost prohibitive.

Whitney's gin was able to clean nearly 200 pounds a day, and the great saving in labor cost thus effected at once placed the occupation of cotton planting on a profitable basis, in addition to giving all the world much cheaper clothes. Even to-day Whitney's gin is essentially the same machine it was when it left his hand more than 100 years ago.

Practically all advances in machinery used in growing cereals have been made by Americans. The great Thomas Jefferson planned a number of improvements to the plow which others carried into effect. William Manning, of New Jersey, was granted a patent for a mowing machine in 1830. The reaper was invented by both Obed Hussey, of Maryland, and Cyrus McCormick, of Virginia, the former taking out his patent in 1833 and the latter in 1834. In 1837 John Deere, of Moline, Ill., invented the steel plow, the first one he turned out being made of an old saw. This improvement greatly aided in settling the prairie country of the West, for the pioneer was thus supplied with a plow which slipped through the fine, sticky soil of that country as no other plow would.

Scarcely less important, from a money-saving standpoint, than the invention of these machines, were the corn-planter and the two-horse cultivator, which came into use about the same time. By means of these effective implements the farmer's ability to raise big crops was greatly increased, as the machines enabled him to use horses in performing every part of the work of growing corn, except the one operation of husking.

Still other Americans have invented the sheaf-binder, which includes a mechanism that can perform the feat of tying a knot automatically; the steam thrasher, which does the work of over 100 men with flails; and machines which reduce from 11 hours to 1½ hours the time necessary for a man to cut and cure a ton of hay.

The American inventors of agricultural implements have done more to make the United States a rich and powerful nation than all the statesmen and all the soldiers since our national life began. If it were not for them, and those who invented the steam engine, steamboat, locomotive, and electric engines, the buffalo and the red man would still possess the vast country between the Mississippi and the Rockies; Chicago would be a sleepy little lake-shore city; St. Louis, Cincinnati, Minneapolis, St. Paul, Kansas City, and Omaha would be frontier settlements; New York would be smaller than Marseilles. For it was machinery that made it possible for us to become so quickly the greatest country in the world. After the crops came the railroads, with the railroads came the population, and with the population came industry and commerce.

THE GROWTH OF AGRICULTURAL INSTRUCTION.

Several hundred years before Columbus discovered America there were in many parts of Europe great religious institutions known as monasteries, which had in their possession many acres of land. In those institutions manual labor was first recognized as a necessary part of an educational system, and the monks were required to cultivate the land around the monasteries in which they lived. In their work and methods the monks furnished models for the peasants of Europe and introduced among them better seed and plants.

Before the first settlement was made in America certain principles of plant growth were published in England, and were recommended to be taught in the schools of that day. But it was not until near the close of the eighteenth century that the attention of practical men began to be directed to the discoveries of science, and hopes began to arise that man would learn something valuable about the vast possibilities of the soil.

Necessity was driving the nations of Europe to study the possibilities of the land because the food supply was often short and famine made frequent appearances. But America was new and possessed such a vast area of fertile land that little attention was paid to the conservation of the fertility of the soil. It took the early colonists several generations to learn that there was any limit to its productiveness. George Washington, Thomas Jefferson, and other large planters called attention repeatedly to the necessity of studying the soil. Benjamin Franklin demonstrated that an acre well fertilized will produce considerably more than an acre unfertilized. In 1785 the first American agricultural society was established in Philadelphia, and Washington and Franklin were members of it. In the same year a similar society was organized in South Carolina, which proposed to establish an experimental farm. These societies led to others in other States, and agricultural fairs were started.

However, with all this agitation by the leading men of America there was a fine scorn for "book farming." By the close of the eighteenth century, however, signs appeared here and there of exhausted lands along the seaboard, where land was becoming harder and harder to get.

Columbia College, of New York, followed the example of certain European schools and in 1782 made provision for teaching agriculture. In 1823 the first practical school of agriculture was established in Maine. Nine years later Connecticut moved in the same direction. In 1857 Michigan, a new State, took the lead in soil study and provided in her constitution for creating agricultural schools; two years later Maryland and Pennsylvania turned in that direction;

and in 1862 the Morrill Land-Grant Act came into effect, which granted the proceeds of public lands to the several States and Territories to provide for the teaching of agriculture. In this same year the Federal Government established a Department of Agriculture, and in 1889 its head became a Cabinet officer as Secretary of Agriculture.

Agriculture is now taught in every State, Territory, and outlying possession of the United States. It is required by law to be taught in the rural public schools of Alabama, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Oregon, South Dakota, and Wisconsin. Training courses for teaching agriculture are offered in State agricultural schools, State normal schools, and county normal and summer schools. Thus the educational machinery of the country is employed to investigate the great underworld of the soil and to carry to the youth and the adult the knowledge that will lead to a better understanding of its wonderful possibilities.

COOPERATION AMONG FARMERS.

This is an age of organization and cooperation, and a great force is the result of a union of many individual forces. A century ago, when the farmer made the larger number of the things necessary for the use of the family, there was little need for cooperation. With the development of modern machinery, we have reached an age of specialization and the farmer must buy his machinery and tools, his clothing, and even much of his food from the manufacturer or the merchant, who is the salesman for the manufacturer. In order, therefore, for the farmer to control the price of the products of the farm and to reduce as much as possible the cost to him of the manufactured articles, it has become necessary for him to combine with other farmers and to buy and sell in large quantities in order that he may get the benefit of wholesale prices. For many years farmers have been realizing the necessity for such cooperation.

One of the first organizations of the farmers was the Grangers, sometimes called also Patrons of Industry. This organization was brought about by O. H. Kelly, whom President Johnson sent to the South immediately after the Civil War to study agricultural conditions. It became a powerful order and at one time had a membership of nearly a quarter of a million.

Another order of tremendous power was the Farmers' Alliance, organized in Texas in 1876 for the purpose of punishing land and cattle thieves. The Louisiana farmers, about the same time, had

an organization known as the Farmers' Union. These two organizations were united in 1887 with the name of Farmers' Alliance and Cooperative Union of America. Another organization known as the Agricultural Wheel, which was effected in Arkansas, united with the Alliance in 1889. These and other State orders met at Ocala, Fla., in 1890 and adopted a platform. It is said that all these various branches of the Farmers' Alliance had a membership of over 5,000,000. During the depression of business from 1893 to 1900 the Farmers' Alliance became involved in politics and split into factions, losing some of the influences that come from united effort. The Farmers' Union of to-day, however, is the successor of the Farmers' Alliance, and it is one of the most powerful organizations in the country.

Through these organizations, the farmers have influenced public-school legislation; they were helpful in creating a national Department of Agriculture, and in establishing agricultural colleges and experiment stations; they have lowered prices in agricultural machinery and kept up prices on agricultural products; they have improved farming by introducing better methods of planting, tilling, and harvesting; and they are now especially interested in securing credit on the same terms as the manufacturers.

WONDERS OF A SINGLE ACRE.

A new light is shed on our agricultural productiveness by figuring the unconsidered details of plant life that spring from a single acre of ground. A bushel of wheat contains an average of 720,000 kernels; and so, if the yield of an acre is 30 bushels, the total number of grains is well toward 22,000,000. The number of stalks per acre is 35,000. If each stalk is only 3 feet tall—and this is a dwarfish stature, indeed—the total is nearly 200 miles. This does not include the miles of roots and leaves.

A ton of average well-dried timothy hay may contain upward of 1,500,000 separate stalks, and an acre may yield 4 tons. A head of timothy of average length will bear from 400 to 500 flowers. Thus the number of timothy blossoms in a good acre is just about double the number of human beings in the whole world. An acre of apple trees in full bearing may yield 100,000 good apples; an acre of tomatoes, 120,000 tomatoes, of which each one contains 1,200 seeds.

Thus the man who can increase the yield of even a single acre of land by so much as 5 per cent will ultimately bring more living individuals into the world than both he and all his posterity can ever take out of it.

THE LITTLE BROWN SEED IN THE FURROW.

A little brown seed in the furrow
Lay still in its gloomy bed,
While violets blue and lilies white
Were whispering overhead.
They whispered of glories strange and rare,
Of glittering dew and floating air,
Of beauty and rapture everywhere,
And the seed heard all they said.

O, little brown seed in the furrow,
At last you have pierced the mold;
And quivering with a life intense,
Your beautiful leaves unfold
Like wings outspread for upward flight;
And slowly, slowly, in dew and light
A sweet bud opens—till, in God's sight,
You wear a crown of gold.

—IDA W. BENHAM.

GREEN THINGS GROWING.

Oh, the green things growing, the green things growing,
The faint sweet smell of the green things growing!
I should like to live, whether I smile or grieve,
Just to watch the happy life of the green things growing!

Oh, the fluttering and the pattering of those green things growing!
How they talk each to each, when none of us are knowing;
In the wonderful white of the weird moonlight
Or the dim dreamy dawn when the cocks are crowing.

I love, I love them so,—the green things growing!
And I think that they love me, without false showing;
For by many a tender touch, they comfort me so much,
With the soft, mute comfort of the green things growing.

—DINAH MULOCK CRAIK.

SEPTEMBER.

We are drinking the wine of the ages,
From cups that are brimming over
With the sweet of a honey unbought with money,
Distilled from the heart of the clover.

The flowers a fringe on the wayside
Are in raiment of purple and gold;
To the rough-hewn edge of the old stone ledge
The clinging brier-vines hold.

We are breaking life's fine elixir
In the waft of the perfumed breeze,
The sudden showers, the sunlit hours,
The rustle of leaves on the trees.

The fathomless blue of the heaven,
The beauty and bloom of the day,
Are making us young—they are waking the tongue
Of the years that have passed away.

'Tis the radiant rare September,
With the clusters ripe on the vine,
With scents that mingle in spicy tingle
On the hill-slope's glimmering line.

And summer's a step behind us,
And autumn's a thought before,
And each fleet sweet day that we meet on the way
Is an angel at the door.

—HARPER'S BAZAR.

DEEP.

Plow deep!
Sow not thy precious seeds
Among the scarce uprooted weeds,
Or thou shalt weep
To find thy crops all choked and dead,
And naught but thorns and tares instead.
Then plow down deep,
The promise ringing in thy ears,
That those who sow their seeds in tears,
In joy shall reap.

PART III. MEN INFLUENTIAL IN IMPROVING AGRICULTURE.

GEORGE WASHINGTON.

No man in the eighteenth century did more to improve farming in America than George Washington. Our histories are full of his political and military achievements, but little is said of his great service for the agricultural improvement of the new Republic. His life was so full of the most important things bearing on the life of our country that it is difficult to estimate in which line he was of most service to humanity. Notwithstanding his success as a soldier and a statesman, he was first and last a farmer.

He owned estates located in many different States, and his published utterances contain many letters about his farms and how he was trying to improve the methods of farming. He induced Gen. Lafayette to send some improved seed from France. He corresponded with the agricultural experts of England and sought the best advice on sheep raising. He imported improved stock from Spain and Holland and bought the latest machinery in England. At that time Scotland was perhaps making more progress in agriculture than any other country, and he sent his agent to Scotland to secure overseers for his plantations.

His home was really a veritable agricultural experiment station, and he had both friends and agents in Europe sending him improved seeds and cuttings and giving him the best ideas in agriculture. He kept weekly records of planting, and made experiments in seed selection and cultivation. He became an expert agriculturist for that day and was consulted by leading scientists of Europe.

He saw with concern the declining fertility of old estates, and advocated crop rotation, the use of fertilizers, and seed selection as the best means to prevent decline. He favored the establishment of agricultural schools and was an active member of the first American agricultural society, which was established in 1785. While he was leading the armies of the Revolution he received regular reports from his overseers. During the most stormy periods of his administration as President, he followed his overseers' work, and he wrote them letters full of advice about planting, cultivating, and caring for the stock. When he grew tired of political affairs, it was to

Mount Vernon that he retired to spend his last days. Thus the greatest man in American life looked upon farming as the greatest of all occupations. The following extracts from his letters show it:

I think that the life of a husbandman of all others is the most delectable. It is honorable, it is amusing, and, with judicious management, it is profitable. To see plants rise from the earth and flourish by the supreme skill and bounty of the laborer fills a contemplative mind with ideas which are more easy to be conceived than expressed.

The more I am acquainted with agricultural affairs the better I am pleased with them, insomuch that I can nowhere find so great satisfaction as in these innocent and useful pursuits. In indulging these feelings, I am led to reflect how much more delightful to the undebauched mind is the task of making improvements on the earth than all the vainglory that can be acquired from ravaging it by the most uninterrupted career of conquest.

I know of no pursuit in which more real and important service can be rendered to any country than by improving its agriculture, its breed of useful animals, and other branches of a husbandman's care.

SEAMAN A. KNAPP.

Essex County, N. Y., gave to America one of the greatest men that has lived in this or in any age. This man was Seaman A. Knapp, born December 16, 1833. It was no part of his great work to lead armies, guide political parties, or write essays on the theory of government and the rights of man. His achievements were greater. He sought freedom and independence in the soil, and he found both, and gave them to the world.

A sketch of the first 70 years of his life is merely the story of his preparation for a great career. Dr. Wallace Buttrick summed it up by saying, "Seventy years of preparation for seven years of work"—a work that is referred to by Dr. Walter H. Page, the Ambassador to England, as "the greatest single piece of constructive educational work in this or any age."

As a boy he took advantage of such schools as were available in that early day in the country districts of New York. Later he entered and graduated from Union College, Schenectady, N. Y. He taught school for several years after graduating. But at the age of 32 he moved to Vinton, Iowa, and settled on a farm. There he regained his health and vigor. During the sojourn in Iowa Dr. Knapp was called to manage several lines of work, all of which were good training for the greater work yet to be done. He established a farm paper. There were few such papers in the country at that time. He, with others, conducted an agricultural campaign. The first course in agriculture in the Iowa College was organized and the graduation of the first class took place during his incumbency as professor and president.

Another crisis in Dr. Knapp's life came about this time. His health gave way under a severe attack of rheumatism. Physicians said he must give up college work. Turning his face to the sunny South he organized a great development company, bought a million acres of land in southwest Louisiana and sent invitations all over the Northwest, "Come South, young men, and grow up with the country." Several thousand came. For many years he had believed that the South was destined for a wonderful future. He said, "Here is a people of pure Anglo-Saxon stock, energetic but conservative, without much admixture of foreign blood. These people should be the conservators of the best American traditions. Here is a productive soil, delightful climate, and long growing seasons."

He at once began to conduct demonstrations in rice growing and diversified farming for benefit of native farmers and immigrants. In 1898, however, he was authorized by the Secretary of Agriculture to visit China, Japan, and the Philippines, to make rice investigations. In 1901 he made a second trip to the Orient; he went to Europe in 1901 to study agricultural conditions, and later to Porto Rico to report on agricultural resources and possibilities.

His training was complete after 70 years of study to begin his great work. In 1903 the Mexican boll weevil began to make such destruction in the Texas cotton fields that Dr. Knapp was sent into Texas to fight its deadly ravages. He began by organizing the farmers and instituting the Farmers' Cooperative Work. Dr. Knapp visited one small farm near Terrell, Tex., about twice a month and directed the operations there. Neighboring farmers met him in field meetings. At the close of the year he had proved that cotton could be grown in the face of the boll weevil, and was urged to extend his teachings and his methods throughout the whole country devastated by the pest. The next year, with funds furnished by Congress and by local business men, he appointed a few agents and began to organize different counties in Texas. The work soon attracted the attention of the country. Congress enlarged its appropriation, local aid was increased, and the work was extended to Louisiana and Mississippi. About this time the General Education Board of New York asked to be allowed to appropriate money for similar work in other cotton States. In a few short years this great work had covered the entire South, had a force of 1,000 agents, an enrollment of 100,000 farmers, 75,000 boys in the corn clubs, and 25,000 girls in the canning clubs. Every State in the South began to show an increase in the average corn production per acre, as well as other crops, and southern corn club boys attracted the attention of the world by producing more than 200 bushels of corn to the acre at low cost. Girls, too, demonstrated practical, scientific work in garden and home. During the year of his death, Russia, Brazil, England, South Africa,

and Argentina sent representatives to this country to study the demonstration work. Sir Horace Plunkett, the great Irish reformer, came for the same purpose, and at the request of the King of Siam, Dr. Knapp sent one of his agents to take charge of agricultural matters in that country.

Dr. Knapp died in Washington, D. C., April 1, 1911. But he lived long enough after this important work was begun to see something of the wonderful results. Although his work was confined chiefly to the Southern States of America, every State and nearly every nation has felt his influence.

SOME OF KNAPP'S EPIGRAMS.

The greatest of all acquisitions is common sense.

A prosperous, intelligent, and contented rural population is essential to our national perpetuity.

A patent to land is a title to nobility, a right to sovereignty.

A great nation is not the outgrowth of a few men of genius, but the superlative worth of a great common people.

It is impossible to impress upon anyone that there is dignity in residing upon a farm with impoverished soil, dilapidated buildings, and an environment of ignorance.

The income of the farm can be increased from three to five fold by the use of improved methods.

Double the crop to the acre and halve the cost.

More power and less hand work.

Increase the earning capacity of country toilers.

No nation can be great without thrift.

Training is the great item which fashions a race.

The world's most important school is the home and small farm.

The public school teacher's mission is to make a great common people and thus readjust the map of the world.

You can cause the soil to become more responsive to the touch of industry and the harvest more abundant to meet the measure of a larger hope.

The common toiler needs an education that leads to easier bread.

The basis of the better rural life is greater earning capacity of the farmer.

It appears to be a philosophy of the southern people to let money slip through their fingers without sticking.

Let it be the high privilege of this great and free people to establish a republic where rural pride is equal to civic pride, where men of the most refined taste and culture select the rural villa, and where the wealth that comes from the soil finds its greatest return in developing and perfecting the great domain of nature which God has given to us as an everlasting estate.

The demonstration work may be regarded as a system of adult education given to the farmer upon his farm by means of object lessons in the soil, prepared under his observation and generally by his own hand.

Any race betterment to be of permanent value must be a betterment of the masses.

An idle saint only differs from an idle sinner in a coat of paint and direction.

The greatest failure as a world force is the man who knows so much that he lives in universal doubt, injecting a modifying clause into every assertion, and ending the problems of life with an interrogation point.

In general, it is not the man who knows the most who is most successful, but the man who imparts an implicit belief in his message.

Agriculture in most sections consists simply in a series of motions inherited from Adam.

This learning agriculture (which is a compound of the following ingredients—one-eighth science, three-eighths art, and one-half business methods) out of a book is like reading up on the handsaw and jackplane and hiring out for a carpenter.

These mechanic farmers now reside in a town or city, live out of a canned garden, and milk a tin cow.

The great battles of the future will be industrial.

We are now prepared for the accomplishment of what we have so earnestly sought, the placing of rural life upon a plane of profit, of honor, and power.

The least worthy monument to a man is a granite block or a marble shaft. They represent the dead man's money and the kindness of friends. The true monument is what the man has accomplished in life. It may be a better gate, or house, or farm, or factory; put his name on it and let it stand for him.

800 PER CENT BIGGER PROFITS FOR THE SOUTHERN FARMER.

I estimate that there is a possible 800 per cent increase in the productive power of the farm laborer in the average Southern State, and I distribute the gain as follows:

300 per cent to the use of more and better mules and farm machinery;

200 per cent to the production of more and better stock;

150 per cent to a rotation of crops and better tillage;

50 per cent to better drainage;

50 per cent to seed of higher vitality, thoroughbred, and carefully selected;

50 per cent to the abundant use of legumes and the use of more economic plants for feeding stock.

KNAPP'S TEN COMMANDMENTS OF AGRICULTURE.

(1) Prepare a deep and thoroughly pulverized seed bed, well drained; break in the fall to a depth of 8, 10, or 12 inches, according to the soil, with implements that will not bring too much of the subsoil to the surface. (The foregoing depths should be reached gradually, if the field is broken with an ordinary turning plow. If a disk plow is used, it is safe to break to the above depths at once.)

(2) Use seed of the best variety, intelligently selected and carefully stored.

(3) In cultivated crops give the rows and the plants in the rows a space suited to the plant, the soil, and the climate.

(4) Use intensive tillage during the growing period of the crops.

(5) Secure a high content of humus in the soil by the use of legumes, barn-yard manure, farm refuse, and commercial fertilizers.

(6) Carry out a systematic crop rotation with a winter cover crop on southern farms.

(7) Accomplish more work in a day by using more horse power and better implements.

(8) Increase the farm stock to the extent of utilizing all the waste products and idle lands of the farm.

(9) Produce all the food required for the men and animals on the farm.

(10) Keep an account of each farm product, in order to know from which the gain or loss arises.

LUTHER BURBANK.

Few people believed until within recent years that a man could achieve distinction in working with plants. Most people know of the work of Edison and some of the marvelous things he has done with electricity, but there is a genius living in California who has done as wonderful things with the plants as Edison has done with electricity. It is Luther Burbank, who is known all over the world as the most wonderful developer of plants.

He was born in Lancaster, Mass., March 7, 1849. His parents were so poor that Luther was unable to attend any but the public elementary school, and even then he had to find work in the factory at odd hours that would bring some income to the family. He cared little, however, for the factory and machinery, and as soon as he could conveniently do so, he left the factory and began in a small way to raise vegetables for the market. While in his potato patch one day, he noticed on the top of each plant a seed ball which interested him. Some were very good, while others were poor. Selecting the best of these, he planted them, and from this selection came the famous "Burbank" variety of potato. It is said that this one variety has been worth many millions of dollars to the world.

While working in his garden he received a partial sunstroke, and his health became so impaired that he was forced to give up his garden and go West, where he could find a climate in which he could work out-of-doors the greater part of the year. He sold the rights to his improved potato seed for \$150, and taking a pocket full of them with him, he started West. He made his home in California, about 50 miles north of San Francisco. It was difficult to secure work, and his money was soon gone. At one time, it is said, he was employed to clean out poultry houses on a ranch, and more than once he had to sleep in them. He was forced to work very hard, being exposed to all kinds of weather, and frequently without sufficient food. His weak constitution was unable to stand such a severe life, and he contracted a fever which came near ending his life. A kind lady in the neighborhood gave him help and encouragement, and he slowly recovered. When his strength came back to him, he secured employment in a small nursery. His love for plants, and his genius for cultivating them, soon made him a valuable man to the nurseryman and to the community. As soon as he could save enough money to acquire a small plat of ground, he started a nursery of his own. The place has since become famous over the whole civilized world as "Santa Rosa, the home of Burbank."

It is said that the first order received by Burbank, was for 20,000 young prune trees. He accepted the order, but he did not have so many trees old enough to bear prunes, and it required about three

years to grow the prune trees. But what he did then started the agricultural world along a new route. The almond is very closely related to the prune, and he decided to make the almond tree bear prunes, since the almond could be planted at once. Therefore, he planted a large quantity of almond seed, inserted prune buds in the almond plants, and in nine months he was ready to fill the order. This achievement brought him money and considerable fame, and within a short time he left the nursery business and became a plant breeder.

For many years his great talent has been devoted to the improvement of trees, flowers, vines, shrubs, vegetables, fruits, and nuts. This improvement is brought about in three ways: (1) By improving the old plant, (2) by combining the good qualities of wild plants with those of their cultivated relatives, and (3) by originating entirely new varieties of plants. In carrying out this work he first takes the pollen from one plant and puts it on the stigma of another plant of the same kind; then he gathers and plants the seed which ripens from the flower he has thus pollinated. As the new plants grow, he selects for perpetuation those which show the qualities he desires.

Constant improvement upon nature has been Mr. Burbank's life-work. Some of the most wonderful results which he has obtained by scientific breeding and crossing of plants are: A Wickson plum as large as a turkey's egg; the plum-cot, which combines the taste and appearance of the plum with those of the apricot; the "shasta daisy," which has several rows of petals and produces flowers 4 inches across; a calla lily 3 feet in circumference and another one only 1 inch in diameter; black roses, and an amaryllis as big as a football. In addition, Mr. Burbank has made very many practical improvements on the potato, the plum, the walnut, chestnut, and many kinds of flowers. He has also "invented" several new kinds of berries, by ingeniously crossing a number of varieties from all over the world.

On Mr. Burbank's estate in California as many as 80,000 lilies are in full bloom at the same time. "No horticulturist ever worked on so vast a scale nor in so scientific a manner as Mr. Burbank." He is still busily engaged in producing new fruits, flowers, and vegetables to nourish the bodies and please the senses of all humanity.

So successful has he become that the feeble lad who once did menial service and slept with the chickens is one of the most famous men in the world. Wealth has come to him, as well as fame, and his work is studied by learned men the world over. He knows the habits of plants as the mechanic knows the movement of machinery, as the sailor knows the motion of the waves and the wind, and as you or I know the peculiarities of our neighbors.

MR. BURBANK'S LOVE OF CHILDREN.

I love the blue sky, trees, flowers, mountains, green meadows, sunny brooks; the ocean when its waves softly ripple along the sandy beach or when pounding the rocky cliff with its thunder and roar; the birds of the field; waterfalls the rainbow, the dawn, the noonday, and the evening sunset—but children above them all. Trees, plants, flowers—they are always educators in the right direction; they always make us happier and better; and if well grown, they speak of loving care and respond to it as far as in their power; but in all this world there is nothing so appreciative as children—these sensitive, growing creatures of sunshine, smiles, and tears.

—LUTHER BURBANK.

LOUIS PASTEUR (1821-1895).

This great French chemist made the wonderful discovery that there are vegetables which prey on animals, just as animals prey upon vegetables. These flesh-eating plants, which are known as bacteria, float in the blood and cells of animals, and though they are so exceedingly small that it takes a very strong microscope to see them at all, they make up in numbers and in appetite what they lack in size. Dr. Pasteur found also that there are good bacteria as well as harmful ones, and that even the harmful kinds could be so changed that, when introduced into one's system, they could do no ill, but on the contrary that they would preserve one from the attacks of the more powerful bacteria. On these discoveries of Pasteur rest in large measure the science and art of modern medicine.

With the knowledge he thus gained, Pasteur himself was able to end the silkworm plague in France, to cure chicken cholera, and the deadly disease, anthrax in cattle, and to perfect an almost infallible treatment for hydrophobia, or rabies. It is said that he added more to the wealth of his country than both France and Prussia together wasted in the bloody war which they fought in 1870-71.

JUSTIN S. MORRILL (1810-1898).

The Land-Grant Act, signed by President Lincoln in 1862, was the work of Mr. Morrill, who at the time was a Congressman from Vermont. This act gave to each State a certain amount of land, the proceeds from the sale of which were to be used for colleges of agriculture and the mechanic arts, "without excluding other scientific and classical studies." Mr. Morrill was the author also of the bill approved August 30, 1890, for the greater endowment of these colleges. There are now 69 institutions in the United States established under these acts.

ISAAC NEWTON (1800-1867).

As the first United States Commissioner of Agriculture, Mr. Newton laid the foundations for the great Agricultural Department as it exists to-day. Upon its creation in 1862 the Government's agricultural bureau was merely a subdivision of the Patent Office; but, administered on the policy formulated by Mr. Newton, it rapidly increased in power and importance. At last, in the Presidency of Benjamin Harrison, it was raised to the rank of an executive branch of the Government and its Secretary assumed a seat in the Cabinet.

 JAMES WILSON (1835-).

It was under the administration of Mr. Wilson that the United States Department of Agriculture experienced its greatest growth. To-day it comprises the greatest academy of scientists ever assembled. Mr. Wilson was Secretary of Agriculture from 1897 to 1913, thus establishing the record of holding a Cabinet portfolio longer than any other department head. Before his appointment as Secretary, Mr. Wilson was director of the Iowa Agricultural Experiment Station and professor of agriculture at Iowa State Agricultural College.

SIGNIFICANT THINGS EVERY SCHOOL BOY SHOULD KNOW.

When the cattle-fever tick is destroyed in the Southern States the country will get much more meat from that section and the producing of it will build up the farms there.

Every country in the world that has diseased plants that can not be sold at home can ship them to us. This results in great loss. The chestnut disease here is an illustration.

We are sending explorers to the ends of the earth for new plants—and getting them.

When a foreign insect invades, our scientists seek its enemy where it came from. The natural enemy of the boll weevil was an ant that could not endure our winters, but the native ant is getting busy.

The object lesson in agriculture is the best teacher; we had 60,000 of them at work last year.

The consumer pays \$1 for food; the farmer gets less than 50 cents for it. Who gets the rest?

The Department of Agriculture has had success in the Southern States through object lessons in the fields, where the best southern farmers in their counties were the instructors. This method should be organized in all the States along lines of greatest necessity.

The southern farm boy is showing the way to grow more of all crops on an acre.

Educate the farmer's boy toward a more valuable life on the farm.

Uplift the farm home through the education of the farmer's daughter toward greater usefulness and attractiveness in the farm home.

There is great promise in the fact that whole classes of graduates of agricultural colleges go back to the farms, having learned how to make them profitable.

—SECRETARY JAMES WILSON, in Year Book, 1911.

O. H. KELLEY.

The National Grange, or Order of Patrons of Husbandry, a secret order of farmers that has enormously benefited agriculture, was founded by Mr. Kelley in December, 1867. Its immediate purpose was to reunite the people of the North and the South, and in this effort it was very successful. The permanent work of the Grange, however, has been to help farmers become better fitted for their work and to make better neighbors of them.

To this end the local granges hold social gatherings, banquets, lectures, and literary and musical programs. The Grange has also been very successful in making the farmer's dollar go farther.. In various sections it conducts cooperative buying operations for its members and maintains mutual fire and life insurance companies. It is now working out a plan for cooperative selling of its members' farm products.

In the legislation of benefit to farmers which the Grange has had an influence in passing are the laws bettering agricultural colleges, establishing an agricultural experiment station in every State and Territory, making the head of the Department of Agriculture a Cabinet officer, creating the Interstate Commerce Commission, reforming the tax system in many States, favoring pure food and dairy products, and establishing rural free delivery.

The Patrons of Husbandry is said to have been the first secret organization to place woman on a plane of perfect equality with man. The order is now in about 30 States, and it has a very large membership.

HORACE GREELEY (1811-1872).

As the first great editor of a daily paper printed for the general public to open his columns to agricultural topics and to advocate better farming methods, Horace Greeley gave a great stimulus to the betterment of the farmer's condition. In addition to writing many editorials in his newspaper, "The New York Tribune," on country life, Mr. Greeley founded an "agricultural department," appointing Solon Robinson as the Tribune's agricultural editor.

GREGOR MENDEL (1822-1882).

In the quiet of his cloister garden, Father Mendel, Abbot of Bränn, conducted with peas a series of experiments from which he deduced laws that provide the foundation for our exact knowledge of the physical processes of heredity. His work is not only the scientific basis of plant and animal breeding, but also of the new science, eugenics, which aims to produce a more intelligent and more vigorous race of human beings. Curiously, Father Mendel's important contribution to knowledge attracted no attention till 1900, when it was rediscovered by three distinguished botanists at the same time—by Hugo de Vries, C. Correns, and E. Tschermak. But so rapidly have his ideas spread that it is now asserted that this pious, modest priest will finally have as great an influence upon the practical aspects of science applied to plant and animal breeding as the great Darwin who formulated the theory of evolution.

LIBERTY HYDE BAILEY (1858-).

Dr. Bailey's great services to the cause of better farming have been of an educational character. He has held various chairs of horticulture and agriculture; he has lectured before the general public on the same subjects; he has edited magazines which are leading the back-to-the-soil movement; and he has written a number of textbooks upon the practical study of the subject. In addition, he is the editor of the standard encyclopedias on agriculture and horticulture. Dr. Bailey was until this year director of the New York State College of Agriculture, at Cornell University, and was chairman of President Roosevelt's Commission on Country Life.

WILBUR OLIN ATWATER (1844-1907).

Dr. Atwater was the first to investigate profoundly the nutrition of plants as applied to agricultural improvement. He secured funds and induced the State of Connecticut to organize the first agricultural experiment station in the United States. He was director of this station from 1875 to 1887. Due to the demonstrations made by him the Hatch Bill was passed by Congress, which made it possible for each State and Territory to have a similar experiment station. Dr. Atwater not only investigated the nutrition of plants, but made thorough researches into the nutritive value of a great variety of food products.

The experiment stations have led to vast savings and equally vast increases in the yield of farm crops. Pests have been combated,

checked, exterminated; farming methods have been improved; new varieties of plants and animals have been introduced; and rural economies and cooperation have been inaugurated as the result of their work. At the lowest calculation, the agricultural experiment stations have increased farm products fully 10 per cent annually and farm values have increased correspondingly.

STEPHEN M. BABCOCK (1843-).

Largely because of his researches as agricultural chief and chemist at the University of Wisconsin, that State is among the foremost in agricultural wealth. The institution with which he was associated has become a model of service to a whole Commonwealth.

The Babcock tester for butter fat in milk has revolutionized dairying. A separate account with each cow becomes possible and necessary. When the unprofitable cow is discovered a whole chain of inquiries is started. Better feeding may be needed, or gentler treatment, or new dairy methods; and many times it is found that the only remedy is a new cow of better breed. The beauty of it all is that a child can make the test, and thus the school and farm may cooperate.

DAVID DICKSON (1809-1885).

Known as "the first millionaire farmer of the South," he developed many improvements in the agricultural practice of the section in addition to perfecting a number of farm implements. Starting at the age of 35 with \$25,000, which he had made in business, he bought 266 acres of land in Georgia, and by the application of business principles he increased the productivity of the soil many fold. He devised the method of breaking the land deep and cultivating shallow, using the so-called Dickson formula as a fertilizer. He practiced seed selection and developed the first prolific variety of cotton, known as "Dickson's cluster." He was also inventor of the "Dickson sweep," a plow adapted for sandy soil, which at the same time lessened the number of furrows necessary in cultivating a crop. Mr. Dickson wrote "David Dickson's System of Farming," a work which has done much to improve agricultural methods.

HAPPY THE MAN.

Happy the man whose wish and care
 A few paternal acres bound,
 Content to breathe his native air
 In his own ground:

Whose herds with milk, whose fields with bread,
Whose flocks supply him with attire;
Whose trees in summer yield him shade,
In winter fire:

Blest, who can unconcern'dly find
Hours, days, and years slide soft away;
In health of body, peace of mind,
Quiet by day:

Sound sleep by night, study and ease,
Together mixt, sweet recreation;
And innocence, which most does please,
With meditation.

—ALEXANDER POPE.

THE HOUSE BY THE SIDE OF THE ROAD.

There are hermit souls that live withdrawn
In the peace of their self-content;
There are souls, like stars, that dwell apart
In a fellowless firmament;
There are pioneer souls that blaze their paths
Where highways never ran;
But let me live by the side of the road
And be a friend to man.

Let me live in a house by the side of the road
Where the race of men go by—
The men who are good and the men who are bad,
As good or as bad as I.
I would not sit in the scorner's seat,
Or hurl the cynic's ban;
Let me live in a house by the side of the road
And be a friend to man.

I know there are brook-gladdened meadows ahead
And mountains of wearisome height;
That the road passes on through the long afternoon
And stretches away to the night.
But still I rejoice when the travelers rejoice,
And weep with the strangers that moan,
Nor live in my house by the side of the road
Like a man who dwells alone.

Let me live in a house by the side of the road
Where the race of men go by—
They are good, they are bad, they are weak, they are strong,
Wise, foolish—so am I.
Then why should I sit on the scorner's seat,
Or hurl the cynic's ban?
Let me live in a house by the side of the road
And be a friend to man.

—SAM WALTER FOSS.

LITTLE BROWN HANDS.

They drive home the cows from the pasture,
Up through the long, shady lane,
Where the quail whistles loud in the wheat fields
That are yellow with ripening grain.

They toss the new hay in the meadow,
They gather the elder-bloom white,
They find where the dusky grapes purple
In the soft-tinted October light.

They wave from the tall rocking tree tops,
Where the oriole's hammock-nest swings;
And at nighttime are folded in slumber
By a song that a fond mother sings.

Those who toil bravely are strongest,
The humble and poor become great,
And so from these brown-handed children
Shall grow mighty rulers of state.

The pen of the author and statesman,
The noble and wise of the land,
The sword and the chisel and palette
Shall be held in the little brown hand.

—M. H. KROUT.

PART IV. OUR DOMESTIC ANIMALS.

THE FARM ANIMALS' FAMILY TREE.

Science has some wonderful stories to tell of our farm animals and their relationships. Men who have studied these things say that the pigs, the oxen, and the sheep are all distant relatives. Other members of the same family are hippopotami, camels, deer, giraffes, and goats. All these animals belong to the family of "artiodactyla." The family gets its name from the Greek language, in which the word means "even-toed." That is, they all have an even number of toes, which is the feature in which the scientists find the family resemblance, just as a boy's friends find a family resemblance in his eyes, or his hair, or his nose.

As for the horse, he must be lonely, indeed, because he has no relatives about the farm at all. In fact, the family that the horse belongs to is rather dying out, for the only animals he can claim any kinship to nowadays are the tapirs and the rhinoceri. The horse's last name is "perissodactylon," or odd-toed. He started as a little beast, no bigger than a fox, with five toes on each front foot and three toes on each rear foot. Gradually the toes grew one into the other till the horse has just one on each foot, which we call his "hoof."

Of all the many thousand kinds of animals known to science, only about 60 can be truly domestic; and by this is meant animals which can be tamed and bred in captivity, and will live under civilized conditions. While scientists say that the domestic animals of the present are not as intelligent as the wild creatures which were their ancestors, they also add that man would never have become civilized had it not been for such beasts as the horse, the ox, and the sheep. As an example, the Indians of the plains in the country are mentioned. Originally they were a feeble race, hunting game as best they were able, on foot and with dogs. Then the white man brought the horse into the country, and as soon as the Indian likewise gained mastery of that animal he became a dangerous antagonist to the settler. More than this, he was able to live better, as well as fight better, with the aid of the horse.

We call the age in which we live the age of the machine, the era of steel; but even so, in this, the most advanced country in the world,

the amount of power developed by draft animals on the farms of the United States exceeds the amount of power developed by machines in all our factories of every kind. Furthermore, one of the greatest industries in the country—that of meat packing—depends directly upon the farmer's best friends, his domesticated animals. Such is the importance of the creatures you see about you, in barnyard, pasture, fold, and pen.

HOW MAN MADE THE ANIMALS TO HELP HIM.

It was not until man learned to provide a home and to care for his family that he showed himself to be superior to the beast. When home life began, family ties were strengthened, love for the different members of his family increased, and all the finer attributes began to develop.

Man needed helpers in his struggle with the outside world, and so did the animals of the forest. Man had wisdom and foresight; animals had food and physical strength. Man needed the animals, and they needed man. But before man learned the value of different animals it is quite probable that he used them only for food. The dog was probably used first as a food, but it aided man in capturing other animals, therefore it gradually ceased to be used as a food, and instead became an important means of securing food. The horse and the camel also were probably used for food at first; but, on account of their superior strength, they became beasts of burden and aided in securing food for man and in fighting man's enemies. The sheep, the goat, and the cow were also domesticated, to be used as a food in time of need. They were of triple value. The milk was a wholesome food, and could be preserved in the form of butter and cheese; their hair or hides could be converted into clothing, and they could be used, like the horse, as a beast of burden. The fowls of the air were likewise domesticated. The hen, the goose, the duck, the turkey, the pigeon, and the peacock gave their eggs for food and their feathers for bedding and even for clothing. Man did not stop here. He went into the forest and caught the wild hog, tamed him, and improved the quality of his flesh until it has become a very important food.

Thus man rose superior to the beast of the forest and the fowls of the air. They contributed to his needs, but he in turn was obliged to provide food for them in order that they might be of more value to him. It was learned that the value of domestic animals is determined by the care that man takes of them. In providing food for them it was discovered that the hard cereals made the best food for himself and his domestic animals, and cereals became, therefore, the chief food of both man and beast.

THE COW.

Did you ever stop to think how much we are indebted to the cow? People who lived two or three thousand years ago seemed to have had a higher appreciation of the value of this animal than we have. The word "cattle" means wealth, and the English word "chattel," derived from "cattle," is still a reminder to us that we have valuable property in this animal.

It is believed by many that the cow was the first of the wild animals to be domesticated, and that she has contributed more to the development of our civilization than any other animal. In early days she was considered so valuable that a man's wealth was measured by the number and size of his herds. Abraham was rich in cattle, and before the real beginning of agriculture the chief occupation of man was tending and improving his flock.

So valuable has this animal been to the human race that it was considered sacred by many early races, chief of which were the Egyptians and Hindus. Cattle was the chief medium of exchange by early civilized tribes, and it is said that the first coin of the Greeks had an ox stamped on it. To kill needlessly or mistreat cattle of any kind was considered a crime by the Greeks, Hebrews, Egyptians, and Hindus.

The cow is just as valuable to us as she was to the ancients who held her in such high esteem. She gives us milk, butter, cheese, and her flesh for food, and without it man could hardly live. She gives us her hide for clothing, and without it we should be sorely in need, and we should have to go back to the wooden shoes that very poor people have worn in different ages. She gives us fertilizer for our crops, and if this plant food should be suddenly taken away the farmers' fields would degenerate. She gives us her bones for buttons with which to fasten our clothes. Her hair is used in making furniture and many other useful articles. She not only gives us all these things, but she gives us power to pull our carts and plows; in ancient times this was almost the only power used by some peoples in cultivating their land.

The cow is used for three things—for beef, for milk, and for butter and cheese. For the past 200 years, and especially for the past 50 years, man has studied the influence of different kinds of food on the cow and has employed the knowledge gained in breeding animals suited to his several needs. As a result, we have three distinct breeds of cattle—one that gives an abundance of milk, one that gives milk especially rich in butter, and the third, called the beef cow, most of whose food is converted into flesh which we use for beef.

We are indebted more to the British Isles and to Holland for our improved cattle than to any other country. It is said that the Ro-

mans, when they conquered Britain, brought cattle to England. The animals of Rome were mixed with the native breed, and from this crossbreeding has come the excellent stock of to-day. The most noted cattle that we have are the following:

The Jersey, brought over in 1818, has attained the widest reputation as a butter producer.

The Holstein, brought by the Dutch when they settled in the present State of New York, is noted for the quantity of milk it produces. It is said that as much as 10 gallons of milk a day have been taken from a single cow. Another breed noted especially for milk is the *Guernsey*.

The Shorthorn, imported from England about 1817, is the most widely distributed, and it is especially noted for its beef making. Another kind of beef cattle is the *Hereford*. These cows give very little milk, in fact, farmers raising them rarely find it worth while to milk them at all. But when these animals are properly cared for, they are fat and plump and almost square. Another one of the famous breeds of beef cattle is the *Aberdeen Angus*, or as it is sometimes called, the *Polled Angus*. This breed originated in Scotland and was brought to this country in 1873.

The systematic improvement of cattle by man began about the close of the eighteenth century. The greatest progress was made in Great Britain, and to Robert Bakewell, of Leicestershire, who lived from 1725 to 1795, must be given the credit of producing such superior animals as to entitle him to the distinction of being called the father of modern cattle breeding.

KINDNESS TO ANIMALS.

Turn, turn the hasty foot aside,
Nor crush the helpless worm;
The frame thy wayward looks deride
Required a God to form.

The common Lord of all that move,
From whom thy being flowed,
A portion of His boundless love
On that poor worm bestowed.

The sun, the moon, the stars, He made
To all His creatures free;
And spreads o'er earth the grassy blade
For worms as well as thee.

Let them enjoy their day,
Their lowly bliss receive;
Oh! do not lightly take away
The life thou canst not give.

THE CALF PATH.

A calf walked home as good calves should
But made a trail all bent askew,
A crooked trail, as all calves do.
Since then three hundred years have fled,
And I infer the calf is dead.

But still he left behind his trail,
And thereby hangs my mortal tale.
The trail was taken up next day
By a lone dog that passed that way,
And then a wise bellwether sheep
Pursued the trail o'er vale and steep;
And drew the flock behind him, too,
As good bellwethers always do.
And from that day, o'er hill and glade
Through those old woods a path was made.

And many men wound in and out,
And dodged and turned and bent about,
And uttered words of righteous wrath
Because 'twas such a crooked path;
But still they followed—do not laugh—
The first migrations of that calf,
And through the winding wood way stalked,
Because he wobbled when he walked.

This forest path became a lane
That bent and turned and turned again;
This crooked lane became a road,
Where many a poor horse with his load
Toiled on beneath the burning sun,
And traveled some three miles in one.
And thus a century and a half
They trod the footsteps of that calf.

The years passed on in swiftmess fleet,
The road became a village street;
And this, before men were aware,
A city's crowded thoroughfare.
And soon the central street was this
Of a renowned metropolis.
And men two centuries and a half
Trod in the footsteps of that calf.

Each day a hundred thousand rout
Followed the zigzag calf about,
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way,
And lost one hundred years a day;
For thus such reverence is lent
To well-established precedent.

A moral lesson this might teach
Were I ordained and called to preach;
For men are prone to go it blind
Along the calf paths of the mind,
And work away from sun to sun
To do what other men have done.
They followed in the beaten track,
And out and in and forth and back,
And still their devious course pursue,
To keep the path that others do.
They keep the path a sacred groove,
Along which all their lives they move;
But how the wise old wood gods laugh,
Who saw the first primeval calf.
Ah, many things this tale might teach—
But I am not ordained to preach.

—ANONYMOUS. From The Pathfinder.

PART V. OUR LEADING AGRICULTURAL PRODUCTS.

THE CORN OF THE WORLD.

The term "corn" is applied in agriculture to the seed of the cereal plants. The word is often understood locally to mean that kind of cereal which is the leading crop of a country, and it may be wheat, barley, oats, maize (Indian corn), rye, millet, or even rice. It is written in Genesis: "And all countries came into Egypt to Joseph to buy corn; because the famine was sore in the land." The grain mentioned in this quotation was probably wheat. Again, in Roman history we read of a great popular uprising because bread was scarce, and the Gracchi became great tribunes of the people because they advocated more favorable corn laws. The grain referred to was wheat. Rice is corn in China and Japan, rye in northern Europe, oats in Scotland, and wheat in England. Ruth gleaned ears of corn in the barley fields of Boaz, while in Pharaoh's wonderful dream the seven good ears of corn that devoured the seven thin and blasted ones were probably ears of wheat. In America an ear of corn means an ear of maize, or Indian corn, our national grain.

It was natural that the cereals should become the source of all our bread. They may be easily preserved, while tubers and bread fruits soon decay. Wheat, barley, oats, Indian corn, millet, and rye, if properly cared for, remain unhurt by cold climate, warm climate, dry climate, or damp climate. Hence their great value to the world.

THE ORIGIN AND DISTRIBUTION OF WHEAT.

It is impossible to ascertain definitely the geographical origin of wheat. It seems to have been a food for man since the beginning of history and to have developed as man has developed. Evidence points to the Valley of Mesopotamia, the cradle of civilization, as the birthplace of wheat, and from this center it is supposed to have spread to Phoenicia and to Egypt. The Chinese considered it a gift from heaven, and the Egyptians attributed its discovery to Isis. The most ancient languages mention it; it is found among the relics of the ancient Swiss lake dwellers; it was cultivated in China 3,000 years ago, and it was a chief crop among the ancient Hebrews.

It has been said before that all the cereals sprang from a kind of wild grass. Wheat, therefore, is related to all the other cereals, but in importance it has outclassed them all.

Wheat was not grown in the new world until after Columbus's discovery. Maize, or Indian corn, was the chief food of the Indians. It is said that a negro slave of Cortez found three or four grains of wheat in the rice which served as a food for the Spanish army. These were sown and thus wheat was introduced into Mexico. The first wheat sown in the United States was by Gosnold, in 1602, on the Elizabeth Islands, off the southern coast of Massachusetts. It was first cultivated in Virginia in 1611, and in the present State of New York by 1622.

It is easy to see that the migration of wheat has been closely connected with the migration of peoples. It is the one cereal that civilized people carry with them, and wherever they make their homes they quickly develop a variety that can be cultivated. This was especially true before the days of the railroad and the steamboat, when it was difficult to transport foods any great distance overland.

It is not as important, commercially, in America as Indian corn and does not adapt itself to new lands and changes in environment so readily. Corn was the main support of the early colonists and the pioneers, but wheat has followed the westward migration of population, and the center of wheat production to-day is in the Middle West.

Wheat is more widely cultivated than any other cereal. It is cultivated from the Arctic almost to the Antarctic circle and in every longitude of the globe, and there is not a month in the year that some nation is not harvesting it. It is interesting to observe when wheat is harvested in different countries:

January—Austria, New Zealand, Chile.

February and March—Upper Egypt and India.

April—Lower Egypt, India, Syria, Cyprus, Persia, Asia-Minor, Mexico, Cuba.

May—Texas, Central Asia, and northern Africa.

June—Southern and trans-Rocky Mountain States of America, Turkey, Greece, Italy, Spain, Portugal.

July—New England, Middle Atlantic and Northwestern States of America, Upper Canada, Roumania, Bulgaria, Austria, Hungary, Southern Russia, Germany, Switzerland, Southern England.

August—The far northwestern States of America, parts of Canada, Belgium, Holland, Great Britain, Denmark, Poland, central Russia.

September and October—Scotland, Norway, northern Russia.

November—Peru, south Africa, northern Argentina.

December—Argentina, Burmah, New South Wales.

It will thus be seen that, since wheat is cultivated in so many different latitudes and altitudes, there must be a great number of varieties, and this is true.

THE VALUE OF WHEAT.

If a nation can be judged at all by its food, wheat would doubtless be the one grain that would serve as standard of measurement. It seems to be the tendency of the civilized world to raise its standard of living, and as it rises, wheat becomes a relatively more important part of human food. Rye and oats furnished the bread of the great body of people in Europe during the Middle Ages. Wheat was high-priced and not extensively grown. England early became a wheat-eating nation. France, Spain, and Italy followed later. Rye is still extensively used in Germany, but wheat is gradually superseding it. Russia is now using more wheat flour than she did 20 years ago. Taking the civilized world as a whole, therefore, wheat forms the principal food of man. It is much more widely distributed over the world than corn or rice. It is a prime necessity of civilized life, and the quantity milled is larger than that of all other cereals combined.

Wheat is essentially a bread cereal. Not only does it have great superiority in sustaining life, but a large variety of healthful, palatable, and attractive foods are made from it, either wholly or in part. Breads, pastries, crackers, breakfast foods, macaroni—products of wheat in almost endless variety in composition, form, and appearance are found on the table and in the market.

Although it is the most valuable food for civilized man, its cultivation has had a wonderful influence on agriculture in general. It is more easily cultivated than any other cereal. Therefore, improved tools and modern machinery could be more easily invented for cultivating wheat than for cultivating any other cereal. From the crooked stick for plowing, we have come to modern drills, harrows, cultivators, reapers, thrashers, steam plows, and the combination of reaper and thrasher drawn by heavy engines. All these were first applied in the cultivation and harvesting of wheat, and modifications of them were made for the cultivation of other plants.

IN THE WHEAT FIELD.

When the lids of the virgin Dawn unclose,
When the earth is fair and the heavens are calm,
And the early breath of the wakening rose
Floats on the air in balm,
I stand breast-high in the pearly wheat
That ripples and thrills to a sportive breeze,
Borne over the field with its Hermes feet,
And its subtle odor of southern seas;
While out of the infinite azure deep
The flashing wings of the swallows sweep,
Buoyant and beautiful, wild and fleet,
Over the waves of the whispering wheat.

—PAUL HAMILTON HAYNE.

HISTORY OF MAIZE.

When Columbus landed in the new world he found the natives eating a food made from a peculiar grain unlike any produced in the Old World, and to distinguish it from the corn of Europe, we have learned to call it Indian corn. In 1498 Columbus observed large fields of this grain growing on the island of Haiti, and in writing to Ferdinand and Isabella of Spain he described an expanse of 18 miles of cornfields. A few years later, another Spaniard, Hernando Cortez, in his march to the city of Mexico, wrote of passing through great fields of corn; and nearly every other explorer of the New World noticed this peculiar plant and the queer-shaped ears of corn. It is little wonder that they took special notice of it, since all the grain cultivated in Europe was similar to wheat, oats, or rye. The corn of the Indians therefore was a curiosity.

Early English explorers in writing of it described it as follows:

The graine is about the bignesse of our ordinary English pease, and not much different in form and shape, but of divers colours; some white, some red, and some blue. All of these yelde a very white sweete flavoure and being used according to its kind, it maketh a very good bread.

The inhabitants of Haiti called the grain mahiz, hence the name maize, and Europeans in referring to it still call it maize. Many authorities believe that the grain originated in Mexico and took its name from a tribe of Indians living in southern Mexico. But when Columbus discovered America it was the leading food of the Indians from the Arctic Circle to the Torrid Zone. The grain, however, was so unlike the cereals of the Old World that the Europeans did not like to use it as a food. They watched the Indians parch it or pound it into meal, but the bread made from it was not so pleasant to their taste as the European bread, and, as a rule, the early explorers ate it only when necessary to prevent starvation. Over 100 years passed after Columbus's great discovery before the settlers from Europe learned its real value. This corn of the Indians was the one grain, however, that was to make America prosperous and end the great famines of the world. It was this grain that saved the first colonies along the coast, and supported the pioneers as they pushed westward.

When the coastal plains were settled and all the river bottoms were taken up, the population pushed westward, fighting the Indians and the wild beasts, until the fertile valleys of the Mississippi and its tributaries were reached. It took nearly two centuries and a half for the white man to take full possession of that great river valley and to send its products to the markets of the world. Not since the Nile Valley fed so many people has such a large part of the inhabitants of the world been fed from one river valley. It was maize—Indian corn—that gave strength to the settlers to make this

conquest, and afterward it was this same Indian corn, at first despised by the Europeans, that made the Northwestern States the food center of America and the Mississippi Valley the granary of the world. Wheat was not sufficient to sustain the inhabitants of the world; and the other cereals—before maize was added to the list of foods—did not give sufficient relief in time of famine that was sure to follow a short wheat crop. It was Indian corn that gave relief to the underfed population. And if this grain that Columbus found on the island of Haiti were taken from the world, famine and pestilence would again stalk abroad in the land, and the prosperity of the world would suddenly be checked.

—Selected from Brooks' "Story of Corn."

WHEN CORN WAS KING.

The farmer who has plenty of corn has both bread and meat for himself and family. Suppose our fathers had had to depend on wheat for their bread. It would have taken them a hundred years longer to reach the Rockies. Only think of a pioneer in the woods depending on wheat for bread. Corn will produce four times as much as wheat per acre, and requires only one-tenth of the seed to seed it down and only one-third of the time from planting till it can be used for food. Wheat must have well-prepared soil, and be sown in the fall, and watched and guarded for nine months before it is even ready to harvest; whereas a woman can take a sang hoe in April and with a quart of seed plant a patch around a cabin, and in six weeks she and the children can begin to eat "roastin' ears"; and when it gets too hard for that, she can parch it. She needs to gather only what she uses for the day; for it will stand all winter, well protected by its waterproof husk. Not so with wheat. It must be all gathered at once when ripe, and thrashed, cleaned, and garnered. And even then it is hard to get bread out of it without a mill. But a small sack of parched corn, with a bit of salt, was an ample supply for a 10-days' hunt or a dash with Jack Sevier after thieving Indians. Corn was King when I was a boy.

And so it was. Corn was king when those hardy pioneers followed Boone into Kentucky and Clark into the prairie lands. Corn was king when Gen. Putnam sent the first body of old Revolutionary soldiers into the Ohio Valley, and it is the power of this king of foods that has sustained the thousands and hundreds of thousands.

THE FARMER'S GOLD.

Drop a grain of California gold into the ground and there it will lie unchanged to the end of time; the clods in which it falls are not more cold and lifeless. Drop a grain of our blessed gold into the

ground, and lo, a mystery. In a few days it softens, it swells, it shoots upward; it is a living thing.

It is yellow, but it sends up a delicate spire, which comes peeping, emerald green, through the soil. It expands to a vigorous stalk; revels in the air and sunshine; arrays itself more glorious than Solomon in its broad, fluttering, leafy robes. At last it ripens into two or three magnificent batons, each of which is studded with hundreds of grains of gold. It sucks from the warm breast of earth the watery nourishment for its growth; it quivers and thrills with the forceful mystery of sense; it ministers to the higher mystery of thought. Heaped up in your granaries this week, the next it will strike in the stalwart arm, and glow in the blushing cheek, and flash in the beaming eye. The slender stalk which we saw shaken by the summer breeze, bending under the yellow burden of harvest, is indeed the "staff of life."

—EDWARD EVERETT.

THE REPUBLIC'S EMBLEM.

The rose may bloom for England,
The lily for France unfold;
Ireland may honor the shamrock,
Scotland her thistle bold;
But the shield of the great Republic,
The glory of the West,
Shall bear a stalk of tasseled corn,
Of all our wealth the best.

—EDNA DEAN PROCTOR.

THANKSGIVING HYMN.

Praise God for wheat, so white and sweet,
Of which to make our bread!
Praise God for yellow corn, with which
His waiting world is fed!
Praise God for fish and flesh and fowl
He gave to men for food!
Praise God for every creature which
He made and called it good.

Praise God for winter's store of ice,
Praise God for summer's heat!
Praise God for fruit trees bearing seed,
"To you it is for meat."
Praise God for all the bounty
By which the world is fed!
Praise God, ye children all, to whom
He gives your daily bread!

—ANONYMOUS.

THE BILL OF FARE.

Pies of pumpkin, apple, mince,
Jams and jellies, peaches, quince,
Purple grapes and apples red,
Cakes and nuts and gingerbread—
That's Thanksgiving.

Turkey! Oh, a great, big fellow!
Fruits all ripe and rich and mellow,
Everything that's nice to eat,
More than I can now repeat—
That's Thanksgiving.

Lots and lots of jolly fun,
Games to play and races run,
All as happy as can be—
For this happiness, you can see,
Makes Thanksgiving.

We must thank the One who gave
All the good things that we have:
That is why we keep the day
Set aside, our mammas say,
For Thanksgiving.

—EUGENE FIELD.

HISTORY OF COTTON.

Cotton is a plant which grows wild in nearly every tropical country. The ancient inhabitants of India were perhaps the first people to use it in making clothes. The Europeans saw the cotton plant for the first time in its natural state about the year 1200, and they spoke of it as "wool growing on trees." When Columbus discovered America he saw the cotton plant growing in the West Indies, and it was afterwards learned that the Mexicans knew of the great value of this fiber, since they have "exquisite cotton fabrics dyed in various colors."

Many years before Sir Walter Raleigh organized his first colony for the purpose of making settlements in America, England knew the value of the cotton goods made in India, Arabia, Egypt, China, and Mexico. In these countries it grew with very little cultivation. In many countries the seed had to be planted only once in every seven years, and the cotton could be gathered twice a year. The fiber was very fine, and the seed barely adhered to it. It was, therefore, easy to shake the seed out, or in many places to whip them out with switches. In those tropical countries, therefore, it required

little labor to raise cotton or to prepare it for manufacture. The inhabitants of Spain and France, Italy and Greece learned to grow cotton in the warmer climates, but they could raise barely enough for their own use. England could raise none. In the early days of the first settlement of Jamestown an attempt was made to cultivate cotton, and it was advertised abroad that cotton would grow in the American colony as well as in Italy.

But transplanting a tropical plant to a temperate climate has a tendency to change all its habits. The seed that had to be planted only once in seven years in the Tropics had to be planted every year at Jamestown. In fact, the seed were planted and replanted, crossed and recrossed with seed from Italy, the West Indies, Spain, and India before a variety could be developed that would thrive well in the temperate climate; and the variety that finally survived is unlike the cotton of the Tropics. The lint is not so fine as that of India; the plant is smaller and requires replanting every year, and a great deal of labor is necessary to make it profitable. The most difficult thing about this hybrid plant is separating the seed from the lint. Unlike the tropical cotton, the fibers adhere so closely to the seed that they can not be shaken off, whipped off, or rolled off, and it is with much difficulty that they can be picked off.

The entire civilized world to-day wears clothing made of cotton; and nearly, if not quite, every civilized nation has its cotton factory; but there is only one small section of the globe that furnishes this fiber in abundance, and this is the Southern States of America, which produce over two-thirds of the cotton of the world. The world, therefore, is dependent upon the South, since cotton is the king of clothing, and the South is the home of the king who levies tribute on the world. The nations of the earth make obeisance to him.

Cotton is the friend of the poor and the luxury of the rich. It is made into cloth so coarse that it may be bought for a few cents a yard. It is made into fabrics so fine and so beautiful that it can hardly be told from silk, and it is made so heavy and so thick that it looks like wool. It is made into rope and cord so strong that it will hold a ship, and it is made into thread so fine that 1 pound will reach more than 100 miles. Every year farmers are improving the variety, and manufacturers discover new ways of preparing and using the fiber. Every year the demand for it increases; and the world, it seems, can not have enough of it. In recent years its by-products have become a food for man, beast, and plants, and its possibilities are not yet fully developed.

—From Brooks' "Story of Cotton."

COTTON.

What a royal plant it is! The world waits in attendance on its growth; the shower that falls whispering on its leaves is heard around the world; the sun that shines on it is tempered by the prayers of all the people; the frost that chills it and the dew that descends from the stars are noted; and the trespass of a little worm upon its green leaf is more to England than the advance of the Russian Army on her Asian outposts. It is gold from the instant it puts forth its tiny shoot. Its fiber is current in every bank, and when, loosing its fleece to the sun, it floats a sunny banner that glorifies the fields of the humblest farmer, that man is marshaled under a flag that will compel the allegiance of the world and bring a subsidy from every nation on earth.

—HENRY W. GRADY.

PART VI. A STUDY OF OUR FORESTS.

FROM ABUNDANCE TO NEED.

When the white man first made his home in America, thick forests hundreds and hundreds of square miles in extent covered the eastern part of the United States, the Rocky Mountains, and the Pacific coast region. Evergreens—pines, hemlocks, cedars, holly, and spruce—grew near the coast in abundance, while farther inland were the most magnificent hardwood forests in the world. At first the forests were a hindrance to progress, because the trees had to be cut down before houses could be built, land cultivated, or roads laid out. Therefore, the early settlers took no care of the trees whatever, and either burned them or caused them to decay.

Conditions have changed slowly. The country has filled with people, towns have sprung up, and railroads have been built. As population has increased, the vast forests of former times have gradually disappeared, and large wooded areas remain only in inaccessible regions. It is becoming more and more difficult to procure lumber for building, and the need of forests to regulate the flow of water and to prevent floods is constantly more apparent. The change from abundance to need has come so gradually that few persons, even those living where the forests formerly were, have realized until within the past few years how fast the forests are going.

The wholesale destruction without replanting has come mostly from ignorance and greed. Many large lumber companies cause wholesale and reckless destruction by cutting small trees that should stand, and by breaking down young trees. Forest fires, caused by carelessness, sweep away not only vast numbers of trees, but destroy likewise houses and crops and even human lives. It is estimated that the loss by fire is as great as the entire amount cut for use in the entire United States; about 50,000,000 acres of woodland are burned over yearly. Notwithstanding the fact that building materials of all kinds are constantly growing scarcer and more costly, more than enough timber to supply our needs is burned every year. The next great loss to the forests is from insects that bore into the trees and destroy them.

Notwithstanding the destruction that has been going on at a rapid rate, we still have large areas of the most valuable forests in

the world, and by careful preservation we have enough to meet the needs of our growing population. But if the destruction continues at the present rate, even this generation may feel deeply the result of the waste.

THE VALUE OF OUR FORESTS.

Few people ever think of a forest as a place to store water. Who would think that "the woods" hold water as well as a mill pond or a reservoir! But they do, although we can not see the water they hold except, perhaps, as a pool here and there; and that is one of the most important functions that a forest can perform.

All of us have noticed in walking through the woods how soft and springy the ground is. A thick carpet of leaves, twigs, and decayed wood covers the earth, sometimes to a depth of several feet. It is very porous, and it absorbs water like a sponge. When storms come and rain falls in torrents, it does not beat directly upon the ground under the trees because the raindrops first strike the leaves and branches above. The water then trickles gently down and soaks into the leafy carpet. If the forest is extensive a very large quantity of water is absorbed—enough to prevent floods except in extraordinarily long periods of rain. Gradually through the weeks and months that follow the absorbed water oozes out of low places as "springs," and it dashes merrily away in little brooks that combine to form creeks and rivers, which flow peacefully and steadily to the sea.

If there are no trees, no leaves to break the beating of the rain, and no spongy mold to hold the water when it falls, no matted roots to prevent washing, the big raindrops spatter upon the earth and quickly form rushing streams that wash the ground into gulleys. The bare earth absorbs some water to be sure, but far less than the humus of the forest. If the rains are continued the rivers are soon filled beyond the capacity of their banks and they spread over the neighboring valleys, carrying devastation with them. After the heavy rains cease, the flood waters subside as suddenly as they had arisen and the streams dwindle to insignificance, sometimes completely drying up in a long, hot summer.

Thus it is that forests act as great reservoirs and aid in preventing disastrous floods and in maintaining the flow of streams at a rate that is nearly uniform all the year round.

Now let us see what use is made of the trees. The greatest of all is for firewood; but this is largely the decaying or faulty trees from the farmer's woodlot, the waste product of a lumber region, or from

land that is cleared for cultivation. It is said that about 100,000,000 cords are used annually.

The greater part of the salable timber, however, is sawed into lumber, which is used in a variety of ways. The first and greatest use of lumber is for building houses, barns, sheds, outbuildings, and fences.

Next comes furniture of all kinds—chairs, tables, beds, and all other house, office, and school furniture; musical instruments; vehicles of all kinds—wagons, carriages, buggies, and parts of automobiles; agricultural implements—plows, harrows, harvesters, thrashing machines, and other farm implements.

Car building is another great use for lumber—freight cars, passenger cars, and trolley cars. Other important uses for timber are for crossties, poles for telegraph and telephone lines, and “shoring” or supports in mines. Even more trees are used in the manufacture of paper than for these purposes. Then there are various small articles used in the home, such as spools, butter dishes, fruit crates, baskets, boxes, all kinds of tools, toys, picture frames, matches, pencils, clothes pins, toothpicks, etc. These are little things, but so many of them are used that they consume a great deal of wood. Next we derive tannic acid for tanning leather, turpentine and rosin, maple sugar, and many extracts used in making medicines.

So valuable are the forests that the whole Nation is interested in preserving them. No one is benefited more by them than the farmer, and no one should be more interested in them.

PRESERVE THE BEAUTY OF THE LANDSCAPE.

In protecting our forests we preserve one of the finest features of America's scenery. Trees give beauty, variety, and tone to every natural picture that our eye rests upon. A shady road, a long, green hillside, quiet woodlands in glorious autumn coloring, orchards laden with ripening fruit! Compare that picture with a country where the hillsides are worn into gullies, where rocks are seen everywhere cropping above the barren soil, where crops are scanty and vegetation stunted. What a difference! Who can enjoy an arid, treeless view, which conveys a feeling of sadness and desolation? But who can resist the fascination of a beautiful woodland scene, and who can look upon it without a sensation of cheerfulness and satisfaction? How good for the soul it is to rest the eye on a smiling landscape!

There has been a great movement toward beautifying cities and villages in the past few years. Streets are cleaner, sidewalks are

better, more shade trees are planted, and more attention is given to beautifying private grounds. The adornment of front yards and porches with vines and flowers is increasing every year. Many causes have been at work to produce this result: The broadening influence of travel, which brings people in touch with what is done in other places to promote beauty; the work of schools; newspaper and magazine articles; and women's clubs everywhere.

In many places, flower and vegetable seeds are distributed free, or at a nominal cost, to the school children; prizes are offered for the best garden, the largest vegetables, the most attractive back yard, the best arranged flower bed, and other efforts of similar nature.

A country where beauty meets the eye at every turn invites the tourist and the homeseeker, is deeply loved by its people, and is an inspiration to poetry and art. It rests largely with us to decide whether our own land shall be such an ideal place.

—From Gregory's "The Checking of the Waste."

HOW TO PLANT A TREE.

The Department of Agriculture at Washington gives the following suggestions for planting trees:

The proper season for planting is not everywhere the same. When the planting is done in the spring, the right time is when the frost is out of the ground and before budding begins.

The day to plant is almost as important as the season. Sunny, windy weather is to be avoided. Cool, damp days are the best. Trees can not be thrust carelessly into a rough soil and then be expected to flourish. They should be planted in properly worked soil, well enriched. If they can not be planted immediately after they are taken up, the first step is to prevent their roots drying out in the air. This may be done by piling fresh dirt deep about the roots or setting the roots in mud.

In planting they should be placed from 2 to 3 inches deeper than they stood originally. Fine soil should always be pressed firmly—not made hard—about the roots, and 2 inches of dry soil at the top should be left very loose to retain moisture.

APPLESEED JOHN.

Many years ago before the great Northwest was settled, and while even a large part of New York and Pennsylvania was still a wilderness, there lived a man who spent a large part of his time in what many people considered a foolish occupation. His name was John Chapman, and, according to tradition, he went through what is now western Pennsylvania, Ohio, and Indiana before the forests were cut away and planted orchards for the settlers who, he was sure, would come later. Many stories have been told of this remarkable

man. Perhaps the best is Rev. Newell Dwight Hillis's "The Quest of John Chapman."

It is said that he spent his winters in the settlements near the Atlantic coast teaching the children and doing odd jobs about the farm. In those days the teachers "boarded around" in the neighborhood. Therefore John Chapman had no board to pay, and he needed little money. But he did not ask for money. He was content to receive his pay in the seeds of apples, peaches, pears, plums, and grapes. This is why he was called "Appleseed John." The farmers and the children saved their seed for him, and when spring came he filled his boat with seeds and started down the Ohio River. At every suitable landing he took his bag of seeds on his back and trudged through the forest until he found a good open place, and there he planted his seed, built a fence of boughs about them, and started out again.

Thus he traveled on and on through many springs and summers, planting his seeds in the unsettled western countries for those who would later come and make their home in the new country. When the first settlers crossed the mountains and began to clear the forests for homes and farms they found orchards and vineyards awaiting them. Although Appleseed John lived many generations ago, a few trees are still standing which are said to have been planted by him. The story of this man, who in his humble way devoted his life to others, is one that may well be told and retold, for while none of us can repeat the work he did, it may inspire us to make some spot on earth better by planting a few seeds or trees for the enjoyment of the next generation.

FOREST SONG.¹

A song for the beautiful trees!
 A song for the forest grand,
 The Garden of God's own hand,
 The pride of His centuries.
 Hurrah! for the kingly oak,
 For the maple, the sylvan queen,
 For the lords of the emerald cloak,
 For the ladies in golden green.

For the beautiful trees a song!
 The peers of a glorious realm,
 The linden, the ash, and the elm,
 The poplar stately and strong—
 For the birch and the hemlock trim,
 For the hickory staunch at core,
 For the locust, thorny and grim,
 For the silvery sycamore.

¹ Read at the first meeting of the American Forestry Congress, in Music Hall, Cincinnati, Apr. 19, 1882.

A song for the palm—the pine,
 And for every tree that grows,
 From the desolate zone of snows
 To the zone of the burning line;
 Hurrah! for the warders proud
 Of the mountainside and the vale,
 That challenge the thundercloud
 And buffet the stormy gale.

A song for the forest, aisled,
 With its Gothic roof sublime,
 The solemn temple of Time,
 Where man becometh a child,
 As he listens the anthem-roll
 Of the voiceful winds that call,
 In the solitude of his soul,
 On the name of the All-in-All.

So long as the rivers flow,
 So long as the mountains rise,
 May the foliage drink of the skies
 And shelter the flowers below;
 Hurrah! for the beautiful trees!
 Hurrah! for the forest grand,
 The pride of His centuries,
 The Garden of God's own hand.

—W. H. VENABLE.

WOODMAN, SPARE THAT TREE.

Woodman, spare that tree!
 Touch not a single bough!
 In youth it sheltered me,
 And I'll protect it now.
 'Twas my forefather's hand
 That placed it near his cot;
 There, woodman, let it stand—
 Thy axe shall harm it not!

That old familiar tree,
 Whose glory and renown
 Are spread o'er land and sea—
 And wouldst thou hew it down?
 Woodman, forbear thy stroke!
 Cut not its earth-bound ties;
 Oh, spare that aged oak,
 Now towering to the skies!

My heart-strings round thee cling,
 Close as thy bark, old friend!
 Here shall the wild-bird sing,
 And still thy branches bend.
 Old tree! the storm still brave!
 And, woodman, leave the spot:
 While I've a hand to save,
 Thy axe shall harm it not!

—GEORGE P. MORRIS.

LITTLE BY LITTLE.

"Little by little," an acorn said,
 As it slowly sank in its mossy bed;
 "I am improving every day,
 Hidden deep in the earth away."
 Little by little each day it grew,
 Little by little it sipped the dew;
 Downward it sent out a thread-like root,
 Up in the air sprung a tiny shoot.
 Day after day, and year after year,
 Little by little the leaves appear;
 And the slender branches spread far and wide.
 Till the mighty oak is the forest's pride.
 "Little by little," said a thoughtful boy,
 "Moment by moment I'll well employ,
 Learning a little every day,
 And not spending all my time in play;
 And still this rule in my mind shall dwell—
 'Whatever I do, I'll do it well.'
 Little by little I'll learn to know
 The treasured wisdom of long ago;
 And one of these days, perhaps, we'll see
 That the world will be the better for me."
 And do you not think that this simple plan
 Made him a wise and useful man?

"HELP ONE ANOTHER."

"Help one another," the snowflakes said,
 As they cuddled down in their fleecy bed;
 "One of us here would not be felt,
 One of us here would quickly melt;
 But I'll help you, and you help me,
 And then what a big white drift we'll see!"
 "Help one another," the maple spray
 Said to its fellow leaves one day;
 "The sun would wither me here alone,
 Long enough ere the day is gone;
 But I'll help you and you help me,
 And then what a splendid shade there'll be!"

"Help one another," the dewdrop cried,
 Seeing another drop close to its side;
 "This warm south breeze would dry me away,
 And I should be gone ere noon to-day;
 But I'll help you, and you help me,
 And we'll make a brook and run to the sea."

"Help one another," a grain of sand
 Said to another grain just at hand;
 "The wind may carry me over the sea,
 And then, O! what will become of me?
 But come, my brother, give me your hand;
 We'll build a mountain, and there we'll stand."

* * * * *

And so the snowflakes grew to drifts,
 The grains of sand to mountains,
 The leaves became a pleasant shade,
 And dewdrops fed the fountains.

—REV. GEORGE F. HUNTING, in the Parish Visitor.

WHEN ALL WILD THINGS LIE DOWN TO SLEEP.

November woods are bare and still,
 November days are clear and bright;
 Each noon burns up the morning's chill,
 The morning's snow is gone by night;
 Each day my steps grow slow, grow light,
 As through the woods I reverent creep,
 Watching all things "lie down to sleep."

I never knew before what beds,
 Fragrant to smell and soft to touch,
 The forest sifts, and shapes, and spreads;
 I never knew before how much
 Of human sound there is in such
 Low tones as through the forest sweeps,
 When all wild things "lie down to sleep."

Each day I find new coverlids
 Tucked in and more sweet eyes shut tight;
 Sometimes the viewless mother bids
 Her ferns kneel down full in my sight;
 I hear their chorus of "good night,"
 And half I smile and half I weep,
 Listening while they "lie down to sleep."

—HELEN HUNT JACKSON.

NATURE'S SONG.

There is no rhyme that is half so sweet
As the song of the wind in the rippling wheat;
There is no meter that's half so fine
As the lilt of the brook under rock and vine;
And the loveliest lyric I ever heard
Was the wildwood strain of a forest bird.

—MADISON CAWEIN.

THE OAK.

A song to the oak,
The brave old oak,
Who hath ruled in the greenwood long!
Here's health and renown
To his broad, green crown
And his fifty arms so strong!
There's fear in his frown
When the sun goes down
And the fire in the west fades out;
And he showeth his might,
On a wild, stormy night,
When the storms through his branches shout.
Then here's to the oak,
The brave old oak,
Who stands in his pride alone;
And still flourish he,
A hale, green tree,
When a hundred years are gone!

—H. F. CHORLEY.

PART VII. APPROPRIATE SONGS AND SELECTIONS.

MY COUNTRY, 'TIS OF THEE!

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing.
Land where my fathers died,
Land of the pilgrim's pride;
From every mountain side
Let freedom ring.

My native country, thee,
Land of the noble free,
Thy name I love;
I love thy rocks and rills;
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze
And ring from all the trees
Sweet freedom's song;
Let mortal tongues awake,
Let all that breathe partake,
Let rocks their silence break,
The sound prolong.

Our father's God, to Thee,
Author of liberty,
To Thee we sing.
Long may our land be bright
With freedom's holy light,
Protect us by Thy might,
Great God, our King.

—SMITH.

THE OLD OAKEN BUCKET.

How dear to this heart are the scenes of my childhood
When fond recollection presents them to view!
The orchard, the meadow, the deep-tangled wildwood,
And ev'ry loved spot which my infancy knew;
The wide spreading pond, and the mill that stood by it,
The bridge and the rock where the cataract fell;
The cot of my father, the dairy house nigh it,
And e'en the rude bucket that hung in the well.

Chorus:

The old oaken bucket,
 The iron-bound bucket,
 The moss-covered bucket,
 That hung in the well.

—SAMUEL WOODWORTH.

WORK, FOR THE NIGHT IS COMING.

Work, for the night is coming,
 Work thro' the morning hours;
 Work while the dew is sparkling,
 Work 'mid springing flowers;
 Work when the day grows brighter,
 Work in the glowing sun;
 Work, for the night is coming,
 When man's work is done.

Work, for the night is coming,
 Work through the sunny noon;
 Fill brightest hours with labor,
 Rest comes sure and soon,
 Give every flying minute
 Something to keep in store;
 Work, for the night is coming,
 When man works no more.

—ANNIE L. WALKER.

HOME, SWEET HOME.

'Mid pleasures and palaces though we may roam,
 Be it ever so humble, there's no place like home;
 A charm from the sky seems to hallow us there,
 Which, seek through the world, is ne'er met with elsewhere.

Home, home, sweet, sweet home!
 There's no place like home! there's no place like home!

An exile from home, splendor dazzles in vain;
 O, give me my lowly thatched cottage again!
 The birds singing gayly, that came at my call,—
 Give me them,—and the peace of mind, dearer than all!

Home, home, sweet, sweet home!
 There's no place like home! there's no place like home!

To thee I'll return, overburdened with care;
 The heart's dearest solace will smile on me there;
 No more from that cottage again will I roam;
 Be it ever so humble, there's no place like home.

Home! home! sweet, sweet home!
 There's no place like home! there's no place like home!

—JOHN HOWARD PAYNE.

CREATION.

The spacious firmament on high,
 With all the blue ethereal sky,
 And spangled heavens a shining frame,
 Their great Original proclaim.
 The unwearied sun from day to day,
 Does his Creator's power display,
 And publishes to every land
 The work of an Almighty hand.

Soon as the evening shades prevail,
 The moon takes up the wondrous tale,
 And nightly to the listening earth,
 Repeats the story of her birth,
 While all the stars that round her burn,
 And all the planets in their turn,
 Confirm the tidings as they roll,
 And spread the truth from pole to pole.

—HAYDN.

THE WONDERFUL WORLD.

Great, wide, beautiful, wonderful World,
 With the wonderful water round you curled,
 And the wonderful grass upon your breast,—
 World, you are beautifully drest.

The wonderful air is over me,
 And the wonderful wind is shaking the tree;
 It walks on the water, and whirls the mills,
 And talks to itself on the top of the hills.

You, friendly Earth! how far do you go
 With the wheat fields that nod and the rivers that flow,
 With cities and gardens, and cliffs and isles,
 And people upon you for thousands of miles?

Ah, you are so great, and I am so small,
 I tremble to think of you, World, at all;
 And yet, when I said my prayers to-day,
 A whisper within me seemed to say—
 "You are more than the Earth, though you are such a dot;
 You can love and think, and the Earth can not!"

—WILLIAM BRIGHTY RANDS.

WE THANK THEE.

For flowers that bloom about our feet;
 For tender grass, so fresh, so sweet;
 For song of bird and hum of bee;
 For all things fair we hear or see,
 Father in heaven, we thank Thee!

For blue of stream and blue of sky;
 For pleasant shade of branches high;
 For fragrant air and cooling breeze;
 For beauty of the blooming trees,
 Father in heaven, we thank Thee!

—RALPH WALDO EMERSON.

THE FARMER'S CREED.

I believe in a permanent agriculture, a soil that shall grow richer rather than poorer from year to year.

I believe in hundred-bushel corn and in fifty-bushel wheat, and I shall not be satisfied with anything less.

I believe that the only good weed is a dead weed, and that a clean farm is as important as a clean conscience.

I believe in the farm boy and in the farm girl, the farmer's best crops and the future's best hope.

I believe in the farm woman, and will do all in my power to make her life easier and happier.

I believe in a country school that prepares for country life, and a country church that teaches its people to love deeply and live honorably.

I believe in community spirit, a pride in home and neighbors, and I will do my part to make my own community the best in the State.

I believe in the farmer, I believe in farm life, I believe in the inspiration of the open country.

I am proud to be a farmer, and I will try earnestly to be worthy of the name.

—FRANK I. MANN.

A MASQUE OF THE SEASONS.

QUEEN.

Summer or winter or spring or fall—
 Which do you like the best of all?

LITTLE JASPER.

When I'm dressed warm as warm can be
 And with boots, to go
 Through the deepest snow,
 Wintertime is the time for me.

QUEEN.

Summer or winter or spring or fall—
 Which do you like the best of all?

LITTLE MILDRED.

I like blossoms, and birds that sing;
 The grass and the dew,
 And the sunshine, too,
 So, best of all, I like the spring.

QUEEN.

Summer or winter or spring or fall—
 Which do you like the best of all?

LITTLE MANDEVILLE.

O little friends, I most rejoice
 When I hear the drums
 As the circus comes,
 So summer time's my special choice.

QUEEN.

Summer or winter or spring or fall—
 Which do you like the best of all?

LITTLE EDITH.

Apples of ruby, and pears of gold,
 And grapes of blue
 That the bee stings through.
 Fall—it is all that my heart can hold.

QUEEN.

Soh! my lovelings and pretty dears,
 You've each a favorite, it appears—
 Summer and winter and spring and fall—
 That's the reason I send them all!

—JAMES WHITCOMB RILEY.

The above can be easily dramatized by selecting children and assigning parts. Suitable costuming will be a simple matter, but is not necessary.

POLLY FLINDERS.

(Found in Mother Goose Village (Rand-McNally) or in Howe Third Reader (Scribners).)

SUGGESTIONS FOR DRAMATIZATION.

Select children about 9 years old to take the parts of Polly Flinders, the mother, Mr. Cotton Stalk, six or eight children (or the whole class) to represent factory workers.

Mr. Cotton Stalk is the only person in anything but ordinary costume. A hat made of leaves from cotton plant, a cotton stalk in his hand, bits of cotton stuck on his clothes will suggest his character.

The name of the nearest factory town may be substituted for London-town.

THE GOLDEN WINDOWS.

(By LAURA E. RICHARDS, Little, Brown & Co.)

WHEN THE WORLD WAS YOUNG.

(By ELIZABETH V. BROWN.)

These two books have some good material and hints for vivid story-telling and play.

A good juvenile nature drama of more length and elaborateness is *Mon-damin: The First Harvest of Indian Corn*. By Harry N. Baum (*Atlantic Educational Journal*, Baltimore, September and October, 1911). This has ample stage directions and clear assignment of parts. Part I is *The Planting of the Corn*; Part II is *The Blessing of the Corn Fields*; and Part III is *The Reaping of the Corn Fields*. Either part is complete enough in itself to be used alone.

JUVENILE SELECTIONS FOUND IN "NATURE AND VERSE."

1. *Marjorie's Almanac*.—Selected.
2. *Who Stole the Bird's Nest?*—L. Maria Child.
3. *A Boy's Song*.—The Ettrick Shepherd.
4. *The Cotton Plant*.—Selected.
5. *Plant Song*.—Nellie M. Brown.
6. *The Four Winds*—F. D. Sherman.
7. *What the Winds Bring*.—E. C. Stedman.
8. *The Body*.—Selected.
9. *Two and One*.—Selected.
10. *Hurrah for the Flag*.—Selected.

QUOTATIONS.

And he gave it for his opinion that whoever could make two ears of corn or two blades of grass to grow upon a spot of ground where one grew before would deserve better of mankind and do more essential service to his country than the whole race of politicians put together.

—DEAN SWIFT.

The year's at the spring
 And day's at the morn,
 Morning's at seven.
 The hillside's dew pearled;
 The lark's on the wing;
 The snail's on the thorn;
 God's in his heaven;
 All's right with the world.

—BROWNING.

And lo! in a flash of crimson splendor, with blazing scarlet clouds running before his chariot and heralding his majestic approach, God's sun rises upon the world.

—W. M. THACKERAY.

And, though we should be grateful for good houses, there is, after all, no house like God's out-of-doors.

—R. L. STEVENSON.

Above, the clear sky was full of stars, the sky a lovely night blue. It was a time when, if ever it will, the soul reigns and the coarse, rude acts of day are forgotten in the aspirations of the inmost mind.

The night was calm—still; it was in no haste to do anything—it had nothing to do. To be is enough for the stars.

—RICHARD JEFFRIES.

The simplicity of winter has a deep moral. The return of nature, after such a career of splendor and prodigality, to habits so simple and austere is not lost, either upon the head or the heart. It is the philosopher coming back from the banquet and the wine to a cup of water and a crust of bread.

—JOHN BURROUGHS.

To him who, in the love of Nature, holds
Communion with her visible forms, she speaks
A various language; for his gayer hours
She has a voice of gladness, and a smile
And eloquence of beauty, and she glides
Into his darker musings with a mild
And healing sympathy that steals away
Their sharpness, ere he is aware.

—WILLIAM CULLEN BRYANT.

BIBLIOGRAPHY.

BOOKS FOR YOUNG PEOPLE.

- Abbott, Jacob. A boy on a farm. New York [etc.] American book co.
- Adams, Joseph H. Harper's outdoor book for boys. New York, Harper brothers, 1907.
- Allen, Grant. The story of the plants. New York, Appleton.
- Bailey, Liberty H. The nursery book. 11th ed. New York, Macmillan, 1907.
- Plant breeding. 4th ed. New York, Macmillan, 1906.
- Beal, William J. Seed dispersal. Boston, Ginn & co.
- Bigham, Madge A. Merry animal tales. Boston, Little, Brown & co., 1906.
- Botts, F. A. C. Camp cooking. Boston, Ball publishing co.
- Bradish, Sarah P. Stories of country life. New York [etc.] American book co., 1901.
- Brooks, Eugene C. The story of cotton . . . Chicago [etc.] Rand-McNally co., 1911. x, 370 p. illus. 12°.
- The story of corn. Chicago [etc.] Rand-McNally co.
- Brown, Russell T. Science at home. New York, Fenno & co.
- Buchanan, H. B. M., and Gregory, R. R. C. Lessons on country life. New York.
- Burton, E., and Stevenson, E. B. Days and deeds: Poetry. Garden city, N. Y. Doubleday, Page & co.
- Prose. Garden city, N. Y., Doubleday, Page & co.
- Carpenter, Frank G. Foods; or, How the world is fed. New York [etc.] American book co., 1907.
- Carpenter, Frank O. Foods and their uses. New York, Scribner, 1907.
- Chamberlain, James F. How we are clothed: geographical reader. New York. Macmillan, 1904.
- How we are fed . . . New York, Macmillan, 1903.
- How we are sheltered. New York, Macmillan, 1906.
- Chase, Annie, and Clow, E. Stories of industry. 2 v. Chicago, Educational publishing co.
- Clodd, Edward. The childhood of the world.
- Comstock, Anna B. Ways of the six-footed. Boston, Ginn & co., 1903.
- Davenport, Eugene. Domesticated animals and plants. Boston, Ginn & co., 1910.
- Duncan, Frances. Mary's garden and how it grew. New York, Century co., 1904.
- When mother lets us garden. New York, Moffat, Yard & co., 1909.
- Eddy, Sarah J., comp. Friends and helpers. Boston, Ginn & co.
- Fair, Albert. Short cuts in carpentry. Industrial book co.
- Fairbanks, Harold W. Stories of our mother earth. 2d ed. Chicago, Educational publishing co., 1909. 197 p. front., illus. 12°.
- Forman, S. E. Stories of useful inventions. New York. Century co., 1911. 248 p. 12°.
- Fultz, Francis M. Out of door studies in geography. Bloomington, Ill., Public school publishing co., 1908.

- aye, Selina. *The great world's farm.* New York, Macmillan co.
- Gregory, Mary H. *The checking of the waste.* Indianapolis, Bobbs-Merrill co.
- Grey, Zane. *The young foresters.* New York, Harper.
- Harrington, Mark W. *About the weather.* New York, Appleton, 1899.
- Lawkes, Clarence. *Nature's children: Little stories of wild life.* Chicago, Educational publishing co., 1911. 186 p. illus. 12°.
- Liggins, Myrta Margaret. *Little gardens for boys and girls.* Boston, Houghton Mifflin co., 1910. viii, 153 p. illus., front. 12°.
- Lolbrook, Florence. *The book of nature myths.* Boston, Houghton Mifflin co., 1902.
- Look, Stella L. *Little people.* New York, Scribner.
- Johnson, Bertha. *Home occupations for boys and girls.* Philadelphia, George W. Jacobs co.
- Johnson, Clifton. *The farmer's boy.* New York, 1907.
- Johnson, Constance. *When mother lets us cook . . .* New York, Moffat, Yard & co., 1908.
- *When mother lets us help.* New York, Moffat, Yard & co., 1909.
- Keffer, Charles A. *Nature studies on the farm: Soils and plants.* New York [etc.] American book co., 1907.
- Kelly, Meriba A. B. *Health chats with young readers.* Chicago, Educational publishing co.
- Kirby, Mary, and Kirby, Elizabeth. *Aunt Matha's corner cupboard.* Philadelphia, Altemus.
- Kirkland, E. S. *Six little cooks . . .* Chicago, McClurg & co.
- Lyon, T. L., and Montgomery, Edward G. *Examining and grading grains.* Boston, Ginn & co., 1907.
- Marks, Jeannette A., and Moody, Julia. *Little busybodies: Life of crickets, ants, etc.* New York, Harper, 1909.
- Martin, Edwin A. *The story of a piece of coal.* New York, Appleton.
- Morley, Margaret M. *A song of life.* Chicago, A. C. McClurg.
- *Origin and development of the embryo.*
- *A renewal of life: how and when to tell the story to the young.* Chicago, A. C. McClurg, 1906.
- Pierson, Clara D. *Among the barnyard people.* New York, Dutton.
- *Among the forest people.* New York, Dutton.
- *Among the meadow people.* New York, Dutton.
- *Among the pond people.* New York, Dutton.
- Rhead, Louis. *The book of fish and fishing.* New York, Scribner, 1908.
- Rogers, Julia E. *Wild animals every child should know.* Garden city, N. Y., Doubleday, Page & co.
- St. John, Thomas M. *Things a boy should know about electricity.* New York. T. M. St. John co., 848 9th ave.
- Schauffler, Robert H., ed. *Arbor day: history, observance, spirit, and significance.* New York, Moffat, Yard & co., 1909.
- Stoddard, William O. *In the open . . .* New York, Harper, 1908.
- Stokes, Susan. *Ten common trees.* New York [etc.] American book co.
- United States. Country life commission. *Report, with an introduction by Theodore Roosevelt.* New York, Sturgis & Walton, 1911. 150 p. 12°.
- Van Slyke, L. L. *Modern methods of testing milk and milk products.* New York, Orange Judd co.
- Walker, Margaret C. *Our birds and their matings.* New York [etc.] American book co.

- Watson, George C. Farm poultry. 6th ed. New York, Macmillan, 1908.
 Williams, Henry S. The wonders of modern science. 10 v. New York, Funk & Wagnalls.

AGRICULTURAL LITERATURE.

Bailey, Liberty H., *ed.* Cyclopedia of American agriculture. 4 v. New York, Macmillan co., 1907-9.

——— The farmer's challenge.

——— The schoolhouse.

Conference for education in the South. Proceedings.

Consult particularly the volumes for 1906, 1907, and 1911.

United States. Department of agriculture. Yearbooks. Bulletins.

See Yearbook. Separate 501, The farmer's cooperative demonstration work, by S. A. Knapp.—Plant industry. Bulletin 503, Fall breaking and preparation of seed bed, by S. A. Knapp.—Plant industry. Bulletin 619, Production of cotton under boll weevil conditions, by S. A. Knapp.—Plant industry. Bulletin 644, Boys' demonstration work, by Bradford Knapp.—Secretary's circular no. 33 (Nov. 1910). The mission of cooperative demonstration work in the South, by S. A. Knapp.—Plant industry. Bulletin 730, The corn crop in the Southern States, by Bradford Knapp.—Plant industry. Bulletin 741, Results of boys' demonstration work in 1911, by Bradford Knapp.—Plant industry. Bulletin 747, Selection of cotton and corn seed on southern farms, by Bradford Knapp.—Plant industry. Bulletin A-79 (Jan. 1912), Girls' demonstration work, by C. H. Benson.

See World's work. Review of reviews, farm papers, school journals, and other magazines.

LITERATURE OF NATURE.

Arthur, Rosalie, *comp.* Out of doors. . . . New York, Dodge publishing co.

Burroughs, John, *ed.* Songs of nature. New York, McClure, Phillips & co.

Carman, Bliss, *ed.* World's best poetry. 10 v. Philadelphia, Morris & co.

See vol. 5.

Lovejoy, Mary I., *ed.* Nature in verse. New York, Silver, Burdett & co.

Mills, Enos A. Wild life on the Rockies. Boston, Houghton Mifflin co., 1909.

Palgrave, F. T., *ed.* Golden treasury of English lyrics. New York, Macmillan co.

Ringer, Edith W., *ed.* Poems and lyrics of nature. London, Walter Scott, ltd.

Warner, Charles D., *ed.* Library of the world's best literature. 46 v. New York, Peale, 1897-99.

For individual poems of nature see the following:

1. S. R. Crockett—Idyll of the mayfield.
2. Norman Gale—The country faith.
3. P. B. Shelley—Ode to the west wind; The cloud.
4. P. P. Cooke—Life in the autumn woods.
5. J. W. Riley—When the frost is on the punkin.
6. Alfred Tennyson—Song of the brook; Selections from Maud; Crossing the bar.
7. W. C. Bryant—A forest hymn; To a water fowl; Robert of Lincoln.
8. Robert Burns—To a mountain daisy; To a mouse.
9. William Wordsworth—Tintern abbey; Daffodils.
10. John Milton—Il Penseroso; L'allegro.
11. Bliss Carman—The joys of the road.
12. W. D. Howells—The song the oriole sings.
13. Mary Howitt—Cornfields.

4. Helen G. Cone—The dandelions.
5. Sidney Lanier—Song of the Chattahoochee; Corn; Tampa robins; The marshes of Glynn.
6. Robert Browning—Sunrise (opening song of Pippa passes); Home thoughts from abroad.
7. Henry Timrod—The cotton boll.
8. J. G. Whittier—Corn song.
9. John Ruskin—Leaves motionless; Cloud balancings (From Modern painters).
10. Stopford A. Brooke—The earth and man.
11. Hamlin Garland—The herald crane.
12. E. R. Sill—Among the redwoods.
13. John Keats—To autumn.

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- Domestic animals, discussion, 39-44.
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- Grangers, *The*, organization, 21.
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ORGANIZED HEALTH WORK IN SCHOOLS

WITH AN ACCOUNT OF A CAMPAIGN FOR SCHOOL HYGIENE
IN MINNESOTA

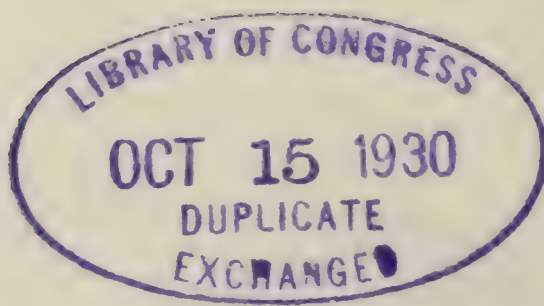
BY

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ORGANIZED HEALTH WORK IN SCHOOLS.

PART I.—ORGANIZATION FOR HEALTH SUPERVISION

In 1900 only 8 cities in America had any organized health work in schools. Since that time over 400 cities have organized departments for the health supervision of school children, and as Dr. Leonard P. Ayres remarks, "this development is without parallel in the history of education." To quote further from Dr. Ayres, "No school (in 1900) had ever heard of a school nurse, for no city in the world employed one; but to-day (1911) 76 American cities have corps of school nurses as permanent parts of their educational forces * * * and 48 cities employ staffs of school dentists."

A few years ago the public schools made no provision for the education of the blind, crippled, or mentally deficient, but now in New York City alone there are more than 100 classes for mentally peculiar children, while arrangements are rapidly making for the care of crippled and other classes of physically handicapped children.

It was only as recently as 1909 that the first open-air school for tuberculous children was opened in Providence, but to-day such schools may be found in something over 40 cities. The special study of the mentally deficient child has engaged the attention of public-school educators for a period of less than three years, but at present plans are rapidly making in many progressive towns and cities for the careful study of such children by the employment of exact psychological methods. All these facts indicate that the physical care of children is engaging the attention of the serious-minded schoolmen. Yet, while all these facts are interesting and significant, it must not be forgotten that no uniform methods of health organization in schools have been evolved, and that there still exist the most widely divergent beliefs and practices in this respect.

Health work in schools needs standardization. The experiences of cities already organized in school health matters ought to be studied by other places attempting such organization for the first time.

In general it may be safely stated that schools receive what they pay for. Whatever sort of public service is worth having is worth

paying for. We frequently learn of a medical officer in schools inspecting many thousand children during the school year and giving to this work only a portion of his time and receiving for his services a pittance of \$200 or less.

To be truly useful, health work in schools requires special training, aptitude, time, and reasonable remuneration. It is a great mistake to regard this work as primarily medical in nature, for it is first and above all else educational. It must aid the boy and girl in health growth and development; it must help the school to adapt its work to individual physical and mental conditions; it must assist in the correction of existing physical defects and in the prevention of others; it must teach the fundamental elements of preventive medicine; it must organize and supervise social-service work in the school community.

In order to indicate some of the best plans for health work in schools and in a measure to furnish standards which may be successfully put into operation, several outlines will be presented. They are devised to meet varying conditions, such as are sure to exist in different places.

These standards are in a general way indicated by the following outline:

- (1) Organization with a medical officer and nurse or nurses.
- (2) Organization with school nurse or nurses only.
- (3) Organization by the employment of a simple, nontechnical Health Survey on the part of the teachers only. Such a survey is provided by a series of questions based upon ordinary observation of physical and mental conditions.

(1) SUPERVISION BY A PHYSICIAN AND ONE OR MORE NURSES.

A physician should be selected who has some special interest in and adaptability for work among school children. In addition to this he ought to make a special study of school hygiene, for medical colleges do not ordinarily include such courses in their curricula.

Whether a physician should give part or all of his time to this sort of work will largely depend upon the volume of work required of him. In school communities where the number of school pupils does not exceed six or eight thousand, it is possible for one well-trained school physician to render satisfactory service by devoting one-half of his time to the work, provided he has as assistants at least two well-trained nurses who possess special adaptability to this kind of work.

In places of from eight to twelve thousand school population it is best to have one physician to give his entire time and an assistant physician to give half of his time. In such places there should be employed at least three school nurses.

In places where the school pupils exceed twelve thousand in number, one may estimate an additional half-time school medical officer for each six thousand increase in the number of pupils and one school nurse on full time for the same number.

For a city the size of Los Angeles this would mean approximately 2 physicians and 12 school nurses.

Many will say that this is an inadequate force for so large a number of pupils, but it must be remembered that school systems have many practical adjustments to make and that this is actually a larger force than schools now employ.

When a city is large enough to require the services of several medical officers in its schools, the following plan is suggested and recommended as an efficient one:

There should be one general director giving his entire time to the work. Instead of employing several half-time medical men as assistants, fewer men on whole time are recommended. The organization might be made as here indicated for a city of, say, 60,000 school children (about 300,000 actual population): One chief health director; 1 general medical officer; 1 eye, ear, nose, and throat specialist; 1 specialist in mental and nervous diseases and experienced in psychological methods; 1 emergency physician, who also would give instruction in hygiene and first aid; 1 woman physician in charge of high-school girls and giving instruction in hygiene.

This number (6) would take the place of 12 physicians under the plan usually in vogue and would result in far better work in every respect.

Such a plan would require a central office of several rooms—one general reception room, one private office for the director, one examining room, one laboratory equipped with medical and psychological apparatus.

There should be a dental and medical clinic, either in connection with the schools (and this is preferable) or, if this seems impossible to arrange, then in connection with some other organization. With this plan in operation, parents of defective children would have the opportunity of taking their children to the general offices for special examinations. The different specialists would keep office hours on different days of the week and could thus give careful and deliberate attention to such school children as required it.

From this office cards of admission to the medical or dental clinics could be issued to those entitled to them.

One special school nurse should be assigned for duty at the central office and should keep the records and assist the physician in charge of the office in the examinations.

There should be one school nurse assigned to each school physician.

The plan proposed presupposes preliminary examinations on the part of nurses and teachers after the manner which will be suggested in the "Outline for the Health Grading of School Children."

This method relieves the medical officers from much purely routine examination of practically normal children and allows them to concentrate their attention on children really needing their expert services. With the methods employed at present, school doctors waste a great amount of time doing purely inexpert work which might far better be done by teachers and nurses. At present most cities are in this way paying experts for inexpert service. This method wastes both time and money and ought to be abolished.

In order to indicate several plans for school health organization which are now in successful operation, the general organization as it exists in four large cities are given below. Several other cities whose organizations are not given ought also to be carefully studied. Of particular importance among those cities whose school health organizations are not here described are the following: Kansas City, Mo., Cleveland, Ohio, Montclair, N. J., Cincinnati, Ohio, Los Angeles, Cal., St. Louis, Mo., Gary, Ind., Boston, Mass., Seattle, Wash., Duluth, Minn., Hibbing, Minn.

Milwaukee, Wis.—The Milwaukee school health department is maintained by the board of education and has the following organization: One medical director; 10 assistant medical inspectors; 1 specialist on diseases of the eye, ear, nose, and throat; 1 full-time dental inspector; 1 special assistant for psychological and anthropological tests; 5 school nurses.

The medical director, dental inspector, and nurses devote their entire time to their work; the remainder of the staff give one-half of each day. A central office is maintained, where the medical director meets parents, conducts special examinations, and carries on the general office work of the department. A dental clinic for indigent children, an outdoor school, and a school for crippled children have recently been added. There are four classes for blind children and four centers for the treatment of speech defects.

The city is divided into 10 districts, 9 of which are approximately equal in size and contain about the same number of schools; the tenth, located in the central portion of the city, covers less area, because the schools are closer together and the conditions met among the pupils are worse than in the outlying sections of the city. Each district is under the care of one assistant medical inspector. For the work of the nurses the city has been divided into five districts, of which the four outlying territories are about equal in size, and the fifth, in the center of the city, is considerably smaller.

Each school has been supplied with the following materials: An emergency case containing a stretcher, drugs, and dressings; a case

for filing the doctor's and nurse's records; a circular for the principal, explaining in brief the purposes of medical inspection, his duties in its accomplishment, and information as to causes and time of exclusions; a circular for each teacher, detailing her duties and giving information as to the early symptoms of contagious diseases; code cards for all teachers on which all diseases of importance are indicated by number; blue cards; psychological examination blanks with circulars of explanation; physical examination blanks.

Complete directions are given to the medical inspectors and nurses in respect to their routine work in the schools. Principals of schools are instructed also in respect to the general plan of health supervision. Indigent children suffering from physical defects are referred to the various city dispensaries. Special attention is given to retarded children, and psychological tests are in constant use.

The Milwaukee system is thoroughly practical and efficient, and excellent results are obtained. It is worthy of careful study. Dr. G. P. Barth is the medical director.

Philadelphia, Pa.—In Philadelphia the examination of school children is conducted by the city health department, but the expense is borne by the board of education. Under ordinary conditions this plan could not be recommended, but it appears to work satisfactorily in Philadelphia. The school nurses are employed and paid by the board of education.

The scope of the work at present includes:

- (1) Routine examination of every child once each year as required by the State law.
- (2) Sanitary inspection of school building.
- (3) The direction and exclusion of children suffering from contagious diseases.
- (4) The examination of absentee children for the bureau of compulsory education.
- (5) Special examination of mentally deficient children.
- (6) Medical supervision of open-air classes for anemic and tubercular children.

(7) Examination of applicants for position of school janitor and other positions in the department or building.

(8) Medical supervision of special classes for blind or crippled children. The supervision of candies and other foodstuffs sold by vendors around the school premises will soon be put into effect.

Oakland, Cal.—In Oakland, Dr. N. K. Foster has organized a plan which gives excellent results. The staff consists of 1 medical director, 1 assistant medical officer, and 7 school nurses.

Each nurse has her own particular school in which to work. At the beginning of the year a special attempt is made to give attention, first, to those pupils who are urgently in need of it. This is

accomplished through the efforts of the teachers and nurses. In this way the worst cases are detected and "followed up" early in the year, a point of much importance. After this preliminary work is finished the nurse examines all of the pupils in her district and sends notices of defects discovered to parents. A visit is invariably made to the home of each child whose parents receive notice.

An interesting and valuable part of the nurse's work consists in simple "health talks" to the individual pupils at the physical examinations, particularly in relation to the defects or disorders from which they suffer. Health talks are also given to entire classes both by the school nurses and school doctors, and special attention is given to instruction in matters pertaining to sex hygiene.

A central office is maintained by the board of education at which the school physicians keep office hours, so that parents may come with their children for special examinations and consultations in respect to further action. The entire department is maintained by the board of education, and the plan works admirably in every respect.

Minneapolis, Minn.—In Minneapolis the work of medical inspection and physical education is combined in the same department. The schools for stammerers, mentally retarded and deficient, the open-air schools, the school gardens, and the truant schools are also under the general supervision of the school health department.

The official organization is as follows: One medical director, 8 assistant medical officers, 18 school nurses, 12 instructors in physical training, 18 playground instructors during the summer months, 1 supervising school nurse.

The work of the Minneapolis school health department is maintained by the board of education, and it is highly efficient.

THE SCHOOL NURSE.¹

Medical inspection has rendered the school nurse inevitable. When the doctor was brought into the schools he faced a new and difficult situation. The school doctor's helplessness has been vividly described by Dr. Hayward, of England, as follows:

As a doctor I felt quite stranded in the strange atmosphere of an elementary school, coming into contact not so much with actual illness as with the primary conditions which produce and foster it—dirt, neglect, improper feeding, malnutrition, insufficient clothing, suppurating ears, defective sight, verminous conditions, the impossibility of getting adequate information from the children or a knowledge of their home conditions, and nobody to whom one could give directions or who could help in examining the children. The only means of approaching the parents was to send an official notice that such or such a condition required treatment. My duties began and ceased with endless notifications, and there it all stopped, as very little notice was taken of them.

¹ Part of this section is taken from Hoag and Terman's "Health Work in Schools," Houghton Mifflin Co.

This has been the experience everywhere. Without an effective follow-up service conducted by visiting nurses, medical inspection is ineffective. Until 1908 New York City relied upon postal cards sent to parents of defective children, and was able to secure action in only 6 per cent of the cases where treatment was recommended. Immediately upon placing the follow-up service in the hands of school nurses the percentage increased to 84. This brought treatment to nearly 200,000 additional pupils.

In a word, the difference between medical inspection without and medical inspection with school nurses is almost exactly the difference between mere diagnosis and cure.

In a majority of cases parental neglect spells ignorance. The postal-card notification is a poor educational device. The nurse goes into the home and by tactful presentation of the child's case effects what no other agency could accomplish. She not only secures action in the case at hand, but she becomes a permanent advisory influence in the homes where she visits. She does what the iron hand of law could not do. We can hardly imagine any kind of legal machinery, devised for compelling parental treatment of children's defects, which would succeed in as large a percentage of cases as the school nurse does.

In the second place, medical inspection without school nurses is always a costly tax on attendance. Children with scabies, impetigo, pediculosis, etc., are sent home by the thousand, there to mingle on the street with other children after school hours, beyond the control of the school and without effective treatment. Where diseases of this kind are treated either by the nurses at school or by the parents after her instruction, exclusions are usually reduced to 5 or 10 per cent of the number previously necessary. In New York the reduction was from about 10,000 to about 1,000 per month. In a quarter of a school year exclusions were enforced in New York as follows: Measles, 18; diphtheria, 140; scarlet fever, 13; whooping cough, 61; mumps, 13; chickenpox, 172; trachoma, 1,264; pediculosis, 8,994; skin diseases, 661; miscellaneous, 1,823; nearly all of the latter four classes of exclusions being preventable by school nursing.

Over 95 per cent of the above exclusions would have been prevented by school nurses. By her ministrations and instruction in the home these diseases of filth and neglect are almost eliminated. As expressed by Jane Addams (*Amer. Jour. of Nursing*, 1908):

The best of medical inspection succeeds only in sending the child home; they say that such and such a child would have a bad effect on the other children, and therefore he is sent back to the family physician for treatment. In most cases a family physician is not called in, because, in the words of Artemus Ward, "There ain't none," and therefore the child is kept out indefinitely, and the public school, so far as that child is concerned, is doing nothing, and the child continues to play in the alley and on the street or sit in the doors of the tenement with the rest of them. This is the whole idea—that medical inspection was suc-

ceeded and almost transposed by the addition of the visiting nurse. The medical inspection got the child out of school and the visiting nurse got the child back. It seems almost foolish to have medical inspection without the visiting nurse.

By virtue of her room-to-room visitation and her opportunities for observation, the school nurse also becomes the ideal sanitary inspector. She notes temperatures, ventilation, seating, cleanliness of room, toilets, blackboards, and the clothes of children. Her hospital standards of sanitation tend to follow her into the schools.

In special schools for the tuberculous, crippled, anemic, and the like the school nurse is indispensable. She records body temperatures, supervises the diet, sleep, and play of the children, and advises continually with parents, teachers, and doctors. In some such schools her constant presence is as necessary as in the hospital ward.

Again, the school nurse becomes an invaluable assistant in the teaching of hygiene to pupils. Every pupil ought to have more expert instruction on such subjects as home nursing and first aid in emergencies than the average teacher can be reasonably expected to give. This deserves a special place in the seventh and eighth grades. In the matter of sex hygiene, too, the school nurse can give much personal advice and instruction to the older girls. The nurse, more than almost any other social worker, sees the dreadful havoc wrought by ignorance of the laws of sex. She becomes vividly impressed with the necessity of such teaching as will supply to young girls the power and motive for self-protection. Girls are willing to consult her the more readily because they realize that this is an everyday subject with her.

The school nurse, like the municipal district nurse, is first and last a social worker. Important as are her duties in the school, her ministrations and educative influence in the home are still more valuable. She instructs ignorant, but fond, mothers in the best methods of feeding, clothing, and caring for their children. She is received in their homes as no other official visitor could possibly be. Mothers are quick to detect the genuineness of her interest in their children and are often ready to follow with blind faith any instructions she has to offer. At her advent in a tenement or street the mothers not infrequently crowd eagerly around her, plying her with questions and bringing their babies for inspection. The school nurse is thus a potent factor in diminishing infant mortality. In short, Dr. Osler does not overstate the case when he says that the visiting nurse is "a ministering angel everywhere." In many a family she becomes a spiritual adviser, pointing out not only inadequate sanitation which keeps them sick, but also educating them on the folly of cutthroat chattel mortgages, unnecessary furniture purchased at ruinous prices on the installment plan, the shortsighted policy of taking children prematurely out of school to work, etc. All this is especially im-

portant in the Americanization of the ignorant foreign-born population. As stated by Dr. Darlington, of New York City:

In all large communities, the poorer element of the foreign-born population presents the greatest problem encountered in municipal health work. Diversified in their habits, often superstitious and resentful of any interference with their mode of life, oppressed by poverty, frequently ignorant or neglectful of the simplest sanitary requirements, their assimilation as citizens of their adopted country comes only as a result of sanitation—persistent, inclusive, and never ending. In public health work this education is brought about by various means. Lectures, printed instructions, and publicity in all its forms are used, but the most valuable and effective form is found in individual instruction in the home. Personal efforts, advice, instruction, and demonstration offer the most practical and effective means, and we have found the employment of trained nurses for the purpose of inestimable value.

That the visiting nurse is a good economic investment is evidenced by the fact that some of the large insurance companies find it to their advantage to employ a number of them to visit the homes of policyholders and give instruction in matters pertaining to hygiene. Department stores and factories also find it good business to employ nurses to look after the health of their employees and to teach them personal hygiene. The visiting nurse is a "health nurse."

The number of school nurses needed varies somewhat according to social conditions and according to the range of duties expected of them. We find all the way from 1,000 to 10,000 children under the care of one nurse. In New York City each nurse has from two to seven schools, with a total attendance of about 4,000 children. In Philadelphia five schools and about 5,000 children are usually allotted to one nurse, while in Boston the proportion of nurses is almost twice as great. Nor is it at all demonstrated that the point of diminishing returns has yet been reached in the number employed. It is not improbable that the ratio will be increased until it reaches an average of one nurse for each 1,000 of the school enrollment. If there were one nurse for every 2,000 pupils, about 10,000 nurses would be required in the entire United States. A nurse's room completely equipped is coming to be regarded one of the essentials in every school building of eight or more rooms.

Thus far the institution of school nursing has not spread to rural communities in the United States, though it has done so to a certain extent in England. This can not be attributed to any lack of need, but only to the greater expense and other obstacles incident to a more scattered population. As our country districts become more densely populated, and as they resort more often to school consolidation, the nurse will here also become a necessary part of the school equipment.

With such an extensive scope of duties, opportunities, and difficulties, it at once becomes evident that both the personal qualities and

the professional training of the school nurse are matters of great importance. She must be quick to understand every class and condition of people, must be patient, sympathetic, and tactful. All agree that tact is absolutely essential. She must be simple, direct, concrete, forceful, convincing. Her business is not to entertain, but to get things done, and she must therefore be persuasive as well as pleasing.

On the professional side, besides having a good high-school education and a complete course in a nurse's training school of recognized standing, she should have had some months of additional experience in a children's hospital. She must also know something of education, child psychology, general hygiene, nutrition, infant mortality, child welfare movements, domestic sanitation, and certain legal matters. If she has had previous experience as a district nurse or as a teacher, so much the better. Good health and willingness to work are, of course, taken for granted.

With the rapid multiplication of school nurses, the desirability of special professional training for them will become more and more obvious. Teachers College, Columbia University, has already introduced a one-year course for this purpose, designed to follow the usual two-year training for nurses. Courses of this nature will no doubt be established at an early date in other teachers' colleges and perhaps also in connection with medical schools. The school nurse has proved her worth to the most skeptical, but her usefulness can be greatly enhanced by the requirement of a professional training which gives special attention to problems of school hygiene.

(2) HEALTH SUPERVISION OF SCHOOLS BY NURSES ALONE.

This plan is adapted to places which are unable, or think they are unable, to procure expert medical service in schools. It has been definitely demonstrated that well-trained nurses with special aptitude are able to accomplish useful results even without the direct aid of medical supervision.

This plan has been in successful operation in Alameda, Cal., since 1911, and is soon to be established at Ely, Austin, Cloquet, Owatonna, and a number of other towns of Minnesota.

Properly trained nurses, as already demonstrated by Dr. N. K. Foster, in Oakland, Cal., are able to detect most of the physical handicaps of school children. Such nurses have no difficulty in discovering common defects of the nervous system, eyes, ears, throat, teeth, skin, and lymph glands of the neck. They can usually detect the presence of adenoids and note disorders of nutrition, as well as observe defective postures. About the only points of importance which they ought not to attempt to cover in their examinations are

those which pertain to certain special conditions which require very exact diagnosis. These would include the heart, lungs, special diseases of the skin and nervous system, and some of the unusual contagious diseases of childhood. Certainly more than 90 per cent of the usual defects of school children will be observed by the carefully trained school nurse, and this plan will inevitably justify itself and gradually lead to more thorough organization with medical service.

According to Dr. R. C. Cabot, of the Harvard Medical School, the school nurse comes to excel the young doctor in detecting the first symptoms of infectious disease. The results of nurse inspection in Boston prove her efficiency in this line. Under the inspection of doctors and teachers the average number of cases of scarlet fever discovered annually in the schools was 14. In 1908 the school nurses found 1,000 cases. Where the doctors and teachers have found an annual average of 86 cases of measles, the school nurses discovered 2,285. This disparity in efficiency, however, is in reality a disparity between nurses and teachers, as previous to the introduction of nurses the physicians had examined for the most part only those children sent to them by the teachers as suspects.

The following communication is from Louis W. Rapeer, who has made an exceptionally thorough study of the procedure and results of medical inspection in about 40 American cities:

I have come to the tentative conclusion that many schools do not need part-time physicians, and that a great deal would be gained and little or nothing lost by employing experienced school nurses for each group of 1,000 to 1,800 pupils.

New York City, as well as other cities, has proved that school nurses can inspect for contagious diseases. Canton, Mass., also has shown that only the nurse is needed.¹

Physicians for less than one hour a day cost about half what nurses cost for full time five and a half days a week. A well-trained school nurse who has the study habit can also make the physical examinations and record the findings on a historical card for each pupil, especially for ailments and defects of ears, eyes, nose, mouth, throat, skin, scalp, malnutrition, and nervousness, including about 97 per cent of the ailments. Nurses usually lessen professional jealousy among the doctors; get satisfactory response from children and from parents; obtain cures, the great object of medical supervision; open the eyes of teachers to the symptoms of ailments and defects; follow up the children they themselves examine; cooperate with women's clubs, dentists, dispensaries, and oculists; get back the truants and absentees; keep down impetigo, lice, and infant mortality in the

¹ See Dr. Arthur Cabot's article in *Phy. and Surg. Jour.*, Boston, May, 1911, and the September (1911) Rept. of the Bureau of Municipal Research, 261 Broadway, New York City.

summer; distribute literature on cure and prevention in the homes; and, in general, are on duty all the time as a life work, not as a perfunctory side issue. With three hours each morning for inspection and examinations and the afternoons for inspection and home visiting, a nurse can care for about 1,000 to 1,800 children.

Occasionally physicians object to the practice of permitting school nurses to make health examinations or to treat cuts, bruises, sores, and the like. The tendency, however, is plainly to the extension rather than the restriction of their duties. There is no reason why physicians should view this with apprehension, since the nurse's work finds its natural limitations without any need for artificial restriction. In every instance where nurses are employed to make the examinations of pupils, one physician or more ought to be available for special consultation in questionable and unusually important cases.

The hearty cooperation of teachers will also be required in this scheme, and they ought to make use of an Outline for a Health Survey, such as that presented on page 18.

(3) HEALTH SUPERVISION BY TEACHERS.

The third plan proposed is for towns and small cities which have no means at hand for the employment of either medical officers or school nurses. Under these circumstances it is still possible to detect and to have remedied most of the urgent physical handicaps from which school children everywhere suffer. The plan is far from ideal, but nevertheless teachers ought never to shirk their responsibility toward the health conditions of their pupils, even though very few teachers, or even nurses, have received adequate training for this special work.

In order to help meet the condition that exists in the schools, the following Outline for a Health Survey of school children is suggested. Its use will succeed not only in largely removing the usual obstacles to health supervision in a community, but even where such obstacles do not exist, the plan when put into operation will, it is believed, greatly assist those engaged in the care of children in the schools. The plan consists of two parts: I. An outline for a partial health survey to be made by the aid of the pupils themselves, or, in the case of young children, by the aid of parents. II. An outline for a more extensive health survey on the part of teachers or nurses.

Whether a medical officer and nurse are employed or not does not materially affect the plan, although, of course, any scheme for health supervision will succeed best where specially trained professional service is available.

The answers of pupils or their parents will furnish some definite information in respect to physical and mental conditions. The ques-

ions under Part II will stimulate and encourage observation with the teacher and will also develop a considerable amount of useful information. With the employment of this survey, no school need wait for the appointment of a medical officer before beginning effective health work. With its use and with the help of a social-worker nurse, excellent results may be expected.

In making the survey the teacher may take her own time. If it is completed in a room of 20 to 40 pupils in a month or six weeks, it should be considered satisfactory, and any teacher should be able to accomplish this without feeling that she is imposed upon. After the pupils' health survey is made, a notice should be sent to the parents in those cases where physical difficulties appear to exist. This notice may be very general and noncommittal in character and should always be signed by the principal of the school. Such a notice has been successfully employed in the following form:

To the parent of ————

The teacher of this child has reason to believe that he is suffering from physical defects, serious enough to need attention. An examination by your family physician or dentist is, therefore, advised.¹

For further detail you are invited to call at the office of the principal at any time you may find it convenient.

Very sincerely yours,

—————,
Principal of ———— School.

A health survey carried out in the manner suggested will result: First, in overcoming most of the prejudice against physical examinations of school children; second, in educating the public in matters of child hygiene and preventive medicine; third, in largely solving the question of expense; fourth, in the discovery of probably 90 per cent of the urgent cases of physical defects; fifth, in decreasing the wear and tear on the teacher; sixth, in increasing the children's health, happiness, and efficiency; seventh, in serving as a useful preliminary examination for a medical officer of schools, so that he may know where to concentrate his attention; eighth, in giving positive information in respect to the kind of hygiene teaching which is most needed.

The significance of all of the answers obtained by the use of the questions in the Health Survey, may not at first be appreciated by a teacher, or other person without medical training, but experience and a little study will gradually make this matter plain.²

¹ Some indication of the nature of the defect may be noted on the blank if the teacher so desires.

² For further discussion of this Outline, see page 36.

AN OUTLINE FOR A HEALTH SURVEY.

Part I.—*Questions to be answered by pupil or parent, or by pupil with the aid of the teacher.*

Name _____ School _____ Date _____

1. How old are you? _____
2. In what grade are you? _____
3. Have you ever had any serious sickness? _____ What was it? _____
4. What do you usually eat for breakfast? _____
5. Do you eat breakfast every day? _____
6. Do you eat a noon meal every day? _____
7. Do you drink coffee? _____ How much? _____
8. Do you drink tea? _____ How much? _____
9. Do you have your bedroom window open or shut at night? _____
10. Have you ever been to a dentist? _____
11. Do you own a toothbrush? _____
12. Do you use a toothbrush? _____
13. Do you sometimes have toothache? _____
14. Do you have headache often? _____
15. Can you read easily what is written on the blackboard? _____
16. Does the print blur in your book? _____
17. Do you often see double? _____
18. Do you ever have earache? _____
19. Do your ears ever run? _____
20. Can you hear easily what the teacher says? _____
21. Is it hard for you to breathe through your nose? _____
22. Do you have sore throat often? _____
23. Do you tire easily in school? _____
24. Do you work any out of school hours? _____
25. What kind of work? _____
26. How much? _____
27. At what time do you go to bed? _____
28. At what time do you get up? _____
29. Does anyone else use your toothbrush? _____
30. Do you eat candy every day? _____
31. How often do you bathe? _____
32. Do you often take cold? _____

Part II.—*Questions to be answered by the teacher or nurse.*

A. General appearance.

- | | Yes. | No. |
|---|-------|-------|
| 1. Is the child healthy appearing? _____ | _____ | _____ |
| 2. Is his color good? _____ | _____ | _____ |
| 3. Is he physically well developed? _____ | _____ | _____ |
| 4. Is he free from apparent deformities? _____ | _____ | _____ |
| 5. Has he a good standing posture? _____ | _____ | _____ |
| 6. Has he a good sitting posture? _____ | _____ | _____ |
| 7. Are the shoulders even? _____ | _____ | _____ |
| 8. Does the child walk normally? _____ | _____ | _____ |
| 9. Are the heels of the shoes worn evenly? _____ | _____ | _____ |
| 10. Is the physiological age of the child apparently equal to his
chronological age? _____ | _____ | _____ |

B. Mental conditions.

Yes.

No.

- | | | |
|--|-------|-------|
| 1. Is the child normally advanced in school?----- | ----- | ----- |
| 2. Is he mentally alert?----- | ----- | ----- |
| 3. Does he answer ordinary questions intelligently?----- | ----- | ----- |
| 4. Does he play normally?----- | ----- | ----- |

C. Nervous conditions.

- | | | |
|--|-------|-------|
| 1. Is the child good-tempered?----- | ----- | ----- |
| 2. Is he free from abnormal emotion?----- | ----- | ----- |
| 3. Does he have good powers of muscular coordination?----- | ----- | ----- |
| 4. Is the child free from spasmodic movements?----- | ----- | ----- |
| 5. Is he free from the nail-biting habit?----- | ----- | ----- |
| 6. Does he speak without stammering?----- | ----- | ----- |
| 7. Is he free from pronounced peculiarity, such as irritability,
timidity, embarrassment, cruelty, moroseness, fits, general
misbehavior, etc.?----- | ----- | ----- |
| 8. Is he apparently free from bad sexual habits?----- | ----- | ----- |
| 9. Is he free from so-called "bladder trouble" (frequent
requests to "go out")?----- | ----- | ----- |
| 10. Is he usually free from headache?----- | ----- | ----- |

D. Teeth.

- | | | |
|--|-------|-------|
| 1. Are the teeth clean?----- | ----- | ----- |
| 2. Are the teeth sound?----- | ----- | ----- |
| 3. Are the six-year molars in good condition?----- | ----- | ----- |
| 4. Has the child been to a dentist within six months?----- | ----- | ----- |
| 5. Are the teeth regular?----- | ----- | ----- |
| 6. Does the child use a toothbrush every day?----- | ----- | ----- |
| 7. Are the gums free from abscesses?----- | ----- | ----- |
| 8. Are the gums healthy looking?----- | ----- | ----- |
| 9. Are the upper teeth straight (not prominent)?----- | ----- | ----- |
| 10. Have decayed teeth been filled?----- | ----- | ----- |

E. Nose and throat.

- | | | |
|--|-------|-------|
| 1. Does the child breathe with the mouth closed?----- | ----- | ----- |
| 2. Is he free from chronic nasal discharge?----- | ----- | ----- |
| 3. Is he free from "nasal voice"?----- | ----- | ----- |
| 4. Has he a well-developed face?----- | ----- | ----- |
| 5. Has he a well-developed chin?----- | ----- | ----- |
| 6. Has he straight, even teeth?----- | ----- | ----- |
| 7. Is he usually free from sore throat?----- | ----- | ----- |
| 8. Is the hard palate wide (not high and narrow)?----- | ----- | ----- |

F. Ears.

- | | | |
|---|-------|-------|
| 1. Does the child usually answer questions without first
saying "What"?----- | ----- | ----- |
| 2. Is he fairly attentive?----- | ----- | ----- |
| 3. Does he have a voice with good expression (not expres-
sionless)?----- | ----- | ----- |
| 4. Does he spell fairly well?----- | ----- | ----- |
| 5. Does he read fairly well?----- | ----- | ----- |

	Yes.	No.
6. Is he free from earache?-----	-----	-----
7. Does he hear a watch tick as far as the average child?---	-----	-----
8. Is he free from ear discharge?-----	-----	-----
9. Is he free from any peculiar postures which might indicate deafness?-----	-----	-----

G. Eyes.

1. Are the child's eyes straight?-----	-----	-----
2. Is he free from chronic headache?-----	-----	-----
3. Does he do his work without fatigue?-----	-----	-----
4. Is he free from squinting or frowning?-----	-----	-----
5. Is the child free from postures which might indicate eye defects, such as leaning over too near the desk, holding the head on one side, etc.?-----	-----	-----
6. Are the eyes free from corneal ulcers or scars?-----	-----	-----
7. Are the eyes free from redness and discharge?-----	-----	-----
8. Are the eyelids healthy looking?-----	-----	-----
9. Can the child read writing on the board from his seat?-----	-----	-----
10. Have the eyes been tested separately with the Snellen Test Type?-----	-----	-----

H. Communicable diseases of the skin.

1. Is the head free from any signs of disease (lice, ringworm)?-----	-----	-----
2. Is the skin of the face, hands, wrists, forearms, and chest free from red, somewhat circular patches (ringworm)?-----	-----	-----
3. Is the skin of the face, hands, and forearms free from infected spots with crusts and pus (impetigo)?-----	-----	-----
4. Is the child free from red scratched lines and spots on the hands, wrists, forearms, chest, and between the fingers (itch)?-----	-----	-----

I. Eruptive children's diseases.

The following points often indicate the early signs of transmissible diseases in children. They will, of course, not ordinarily be observed at the time of making this health survey:

	Yes.	No.
1. Flushed face-----	-----	-----
2. Lassitude-----	-----	-----
3. Vomiting-----	-----	-----
4. Eruptions-----	-----	-----
5. Congested eyes-----	-----	-----
6. Discharging eyes-----	-----	-----
7. Nasal discharge-----	-----	-----
8. Persistent coughing-----	-----	-----
9. Scratching-----	-----	-----
10. Aches and pains-----	-----	-----
11. Sore throat-----	-----	-----
12. Headache-----	-----	-----

Summary.

Physical development -----
Nervous system -----
Nutrition -----
Mental condition -----
Eyes -----
Ears -----
Nose -----
Throat -----
Teeth -----
Skin -----
Eruptive diseases -----
Food -----
Ventilation -----
Coffee habit -----
Tea habit -----

Remarks.

The following is an abbreviated card form of the outline:

A TEACHER'S HEALTH SURVEY OF THE SCHOOL CHILD.

Name	School	Grade	Age		
Date					
				Yes.	No.
1. Have you ever been in a grade more than one year?					
2. Have you ever had any serious sickness?					
3. Do you feel strong and well now?					
4. Do you eat breakfast ¹ every day?					
5. Do you eat a noon meal every day?					
6. Do you drink coffee?					
7. Do you always have your bedroom window open at night?					
8. Have you been to a dentist within a year?					
9. Do you have toothache often?					
10. Do you own a toothbrush?					
11. Do you use your toothbrush every day?					
12. Do you have a toothbrush of your own?					
13. Do you have much trouble with headache?					
14. Can you read writing on the blackboard from your seat?					
15. Does the print in your books run together or look dim or crooked?					
16. Do your eyes hurt after reading a good while?					
17. Do you sometimes see two letters or two lines instead of one?					
18. Do you often have earache?					
19. Do your ears ever run?					
20. Can you always hear the teacher?					

¹ Try to discover what the child usually has for breakfast.

	Yes.	No.
21. Do you go to bed by 9 o'clock?-----	-----	-----
22. Do you go to bed by 10 o'clock?-----	-----	-----
23. Do you bathe at least once every week?-----	-----	-----
24. Have you ever been vaccinated?-----	-----	-----
25. Have you ever had smallpox?-----	-----	-----
Remarks: -----		

This child has had the following diseases at the age indicated below :

Chickenpox when ---- years old.	Whooping cough when ---- years old.
Diphtheria when ---- years old.	Pneumonia when ---- years old.
Measles when ---- years old.	Typhoid fever when ---- years old.
Tonsillitis when ---- years old.	Smallpox when ---- years old.
Mumps when ---- years old.	Tuberculosis when ---- years old.
Scarlet fever when ---- years old.	Infantile paralysis when ---- years old.

HEALTH SUPERVISION IN RURAL SCHOOLS.

Health work in rural schools presents some problems entirely different from those found in large villages and in cities. Consequently this phase of school hygiene requires a separate presentation.

Rural schools are, with only a few exceptions, entirely unprovided with health supervision of any nature. Yet these are the very places most in need of it. In the larger centers competent doctors are available, and in the cities free medical and dental clinics may always be found, but in the country medical and dental attention is often difficult to obtain. Again, people in the country are little inclined to seek aid from physicians or dentists, simply because they have not yet been educated to do so except in serious cases. It therefore happens that children of the rural schools are in general (contrary to the general impression) more in need of medical and dental attention than the children of larger communities. There is also a common impression that country children are naturally more vigorous than city children. This ought to be true, but unfortunately it is not. In general food is not as well prepared in the country as it is in the city; the available variety is smaller; the houses and schools are less well ventilated; overheating in winter is common; tuberculosis is not so well understood and the chances for "house infection" are therefore greater, and general public sanitation is almost without exception neglected in the country. Children in the country are more exposed to unfavorable weather conditions than are city children. They often walk long distances in extreme heat, cold, or wet; sit in school with damp clothing or wet feet. They almost invariably wear too much clothing indoors in cold weather, and are consequently overheated in the schoolroom and then are chilled on the way home. As an example of this last statement, the writer last winter visited a rural district school on a day when the outdoor temperature was 10° below zero. On stepping into the school the room seemed rather

warm and, upon looking at the thermometer, he found it registered exactly 90°. There was, therefore, a difference of just 100° between the outside and inside temperature—a condition which is not exceptional in rural schools. In spite of the high temperature of this schoolroom, some pupils were present who were wearing heavy woolen “mackinaw” stockings over which were pulled heavy felt high shoes reaching nearly to the knees. Many wore a thick, woolen sweater over a vest, shirt, and undershirt, and in some instances two or more undergarments were worn beneath the outside shirt. In the case of one boy six layers of fairly heavy clothing were counted, and the body was of course bathed in perspiration. Under such conditions it is no wonder that colds and other respiratory disorders are common, and that many country children are out of school on account of various kinds of sickness.

The sanitation of a rural school is usually very bad. The common drinking cup hangs from a nail over the water pail; floors and desks are often very dirty; ventilation is a negligible quantity; outdoor toilets are in unspeakable condition; washing facilities are either not provided at all, or consist of a pail of water, a dirty tin basin, and one common towel.

The common conviction that country children gain vigor by walking long distances to school in all sorts of weather, where they remain at least six hours under favorable conditions, without an adequate noon meal, is only another of the prevalent health superstitions that need correction.

There are probably just as many adenoid, tonsil, ear, and eye cases among country children as among city children, and what is true of these defects is no doubt true of nearly all of the other common physical defects. This point, however, is one which needs careful investigation before exact comparisons can be made. My own somewhat limited experience with children in the rural schools leads me to believe that the proportion of defects among city and country children is about the same, and that in general vigor city school children have on the average a very considerable advantage over their country brothers and sisters.¹

Under such conditions, how may rural schools obtain some sort of health supervision? Two plans are possible: First, the teacher herself may be obliged to assume the entire responsibility of health supervision; second, county health officers may under some conditions act as school health officers for part or all of their respective counties. The latter plan is the more desirable one, and county health officers ought to be appointed on full time at adequate salaries. A plan of

¹ This statement would, of course, not be true if one compared the children of the slums with country children.

this kind would demand the services of well-trained men, and would considerably enlarge the field of preventive medicine in the country. State aid might and should be given to the maintenance of such county health officers, just as it is now given to rural schools. At present the county health officer is often an incompetent medical man; with the plan suggested, none but competent men, to whom are offered adequate salary and reasonable tenure of office, should be considered.

In many cases the teacher herself will have to do the best she can, entirely unaided. She should be prepared to observe and to recognize the ordinary defects of school children. The normal school ought to offer courses for such preparation, but where the teacher has not had training in a normal school she should acquire information in the best manner possible. In order that she may get it, county superintendents should provide study courses and obtain the services of competent physicians for special lecture and demonstration work with the teachers.

Superintendents would do well to follow the plan of Michigan, Minnesota, and Virginia, and employ a specialist to visit as many schools of the State as possible, in order to instruct teachers on school and child hygiene.

THE MEDICAL OFFICER IN SCHOOLS.

There is no general agreement in respect to the qualities necessary for school medical officers. Many communities appoint almost any physician who has a fair standing, without reference to his special training or aptitude. In some places men or women have been appointed as school health officers who have had no medical training of any description.

As a matter of fact the position of school health officer in the United States has never been standardized. As conditions now exist, we find the following types of health officers in schools: (1) Well-trained full-time medical officers; (2) well-trained part-time medical officers; (3) well-trained emergency medical officers; (4) inadequately trained medical officers in divisions 1, 2, and 3; (5) hygienists without medical training on part or full time; (6) physical directors who include health examinations as part of their duties, and who may or may not possess medical training; (7) full-time nurses who make examinations; (8) part-time nurses who make examinations; (9) principals or teachers who make partial tests of physical conditions.

Whether a community employs a medical officer for part or full time is a matter of secondary importance compared with competency. In England school health officers must show preparation for their work; but very few physicians in this country have had any special train-

ing in school hygiene. Well-trained physicians may, however, easily acquire the special training necessary. A physician whose preparation has included the usual academic branches and thorough work in biology, general hygiene, physiology, chemistry, physics, pathology, and bacteriology need find no special difficulty in rapidly acquiring the details of child and school hygiene; nor will he in every instance need for this purpose attendance upon special courses of instruction, desirable as the latter undoubtedly are.

Such a physician must, first of all, possess aptitude in handling school children; second, he must understand and be in sympathy with modern pedagogical problems; third, he must possess diplomacy in handling all sorts and conditions of people.

The special knowledge of school hygiene and of pedagogy he may, if need be, acquire through an acquaintance with the now abundant literature on these subjects; the other qualities he must naturally possess, for he can never acquire them through study alone.

A community, then, in selecting a school medical officer, should seek a cultured physician whose training in the fundamentals of medical science has been adequate and who, in addition, possesses aptitude and enthusiasm for the work and a willingness to supply any deficiency he may have along special lines. Having standardized these general qualifications, most other matters will be found to consist of small details of administration.

Large communities, requiring full-time men at adequate salaries, have a right to demand special and somewhat prolonged training, for child and school hygiene is truly a specialty. Ordinarily such training will not be acquired in less than one year in addition to the usual four-year medical course, or six-year "combined courses." The possession of a Doctor of Public Health degree, such as has long been given in England and is now given at Harvard, the University of Michigan, and the University of Wisconsin, will furnish evidence of the highest specialized training and is certainly most desirable when it can be obtained, for school hygiene is after all only one phase of public hygiene.

Having agreed on the main principles which should underlie the appointment of a school health officer, certain details of administration should be considered.

1. The school health officer should in the larger places be controlled by the board of education.

2. A cooperative plan whereby the board of education and board of health jointly control school hygiene may be desirable for special local reasons.

3. School health officers may be provided by combining the position of town or small city health officer with that of school health officer, in which case the expense may be shared by the board of health and

board of education; the appointment may be made by the former board with the approval of the latter. This is an excellent arrangement for large towns and small cities. It has worked out admirably in the city of Rochester, Minn.

4. County health officers, if properly qualified, may be appointed as school officers as well, and in this joint capacity supervise the school health of a village or a whole county, according to the population and distance involved. This will often solve the problem of hygiene in rural schools.

5. The compensation for a school health officer may be based upon the time required of him and upon the amount of his responsibility. A full-time officer should receive from \$2,500 to \$5,000, according to the size of the community.¹ A part-time officer may be paid for one-half of every school day from \$900 to \$2,000. In some instances where, for example, one man is responsible for the entire health supervision of a rather large community, as in Pasadena and San Diego, Cal., the salary should be from \$1,600 to \$2,000.² Where less than half of every day is required, it is advisable to base the remuneration upon the number of pupils examined, and not less than 50 to 75 cents should be paid for each examination. At this rate a town with a school population of 600 pupils should pay from \$300 to \$450. Any community with less than 1,800 pupils would do well to adopt the per capita plan of payment as a basis for salary. Voluntary or cheaply paid service is never advisable. It invariably fails after a comparatively short trial.

6. Large cities should employ a director of school hygiene and several assistant directors on full time. A few half-time men may be required, but in general the work of half-time men in large cities will be better done by full-time school nurses.

7. School health officers should familiarize themselves with the following divisions of school and child hygiene: (*a*) Transmissible diseases; (*b*) school sanitation; (*c*) physical defects; (*d*) mental defects; (*e*) dental hygiene; (*f*) the teaching of hygiene; (*g*) juvenile delinquency; (*h*) retardation; (*i*) school hygiene literature; (*j*) the elements of school architecture.

The position of health officer in schools must no longer be regarded as a cheap job for a cheap man. Schools which are satisfied with inferior officers and teachers will no doubt be satisfied with incompetent medical officers. Progressive schools will appoint only well-trained medical officers who are worthy of the respect of the com-

¹ Oakland, Cal., pays \$3,600; St. Louis, Mo., pays \$3,500; Milwaukee, Wis., pays \$3,800; Minneapolis, Minn., pays \$3,500. All of these salaries are too low for the service given.

² Pasadena pays \$1,600; San Diego pays \$1,800. Each of these cities should pay \$2,000.

nunities in which they live. American school communities may well study the subject of school health supervision as carried out in England, Germany, Denmark, and some other European countries where the matter has long ago passed the experimental stage. There a school health officer is treated with at least as much deference as the school superintendent or head master.

THE STUDY OF EXCEPTIONAL CHILDREN.

Exceptional children of various types have been in our schools since schools began, but only within the past two or three years has any systematic attempt been made to recognize and classify them. Indeed, such recognition and classification was almost impossible until psychologists developed practical, direct methods for the use of schools. Teachers have always been able to point out some "fools" in their classes, and other types of exceptional children have been vaguely recognized, but "fools" have been present who were thought to be merely slow or dull; "misfits" who were supposed to be "fools"; dullards who were considered "misfits"; and so on indefinitely. It remained for clinical psychologists to devise methods whereby these various types might be studied and classified, and among these must be particularly mentioned Lightner Witmer and Goddard of this country, and Binet and Simon of France.

Although exceptional children have for years been studied by various well-known methods in various institutions, no direct means have ever been developed for the study of exceptional school children until recently.

In 1905 Binet and Simon, of Paris, first published their tests, now popularly known as the "Binet test," and in 1908 and 1911 they still further developed and improved this method. These tests have from time to time been modified, enlarged, and improved by various other psychologists, including among others Goddard of Vineland, Huey of Johns-Hopkins, Kuhlmann of Faribault, and Terman of Stanford.

The Binet method still leaves much to be desired, but is nevertheless serving to stimulate teachers as they have never been stimulated before to make careful observations of the unusual types of children under their care. According to recent investigations, and especially those of Goddard, from 1 to 3 per cent of the children in our public schools are mentally defective, and this in spite of the fact that they are frequently unrecognized as such by either their parents or teachers. Such children often present no physical signs of such defectiveness and may indeed be among the best-looking children in a grade. Sooner or later, however, children of this type become retarded, and attention is thus called to them. A safe rule for

teachers to follow is that every child who is retarded in school two or more years without evident reason should be suspected of possessing some degree of mental defectiveness. Not every child who is thus retarded is feeble-minded, but proof to the contrary should at least be established before the child is removed from suspicion. Degrees of feeble-mindedness are present among school children, varying all the way from actual idiocy to the condition of the high-grade feeble-minded person known as the "moron," who is nearly, but not quite, normal.

These children become mentally fixed at various ages, beyond which they do not usually progress much. For example, the writer recently examined a girl of 14 who had been in the first grade for five successive years, and it soon became apparent that she was mentally fixed at about the age of 3. Beyond this degree of intelligence there is no reason to believe she will ever pass. Another child had a chronological or actual age of 14 and a mental age of $8\frac{1}{2}$. This boy may perhaps develop to a mental age of a normal child of 9 or 10 years, but this is extremely doubtful. Still another pupil had an actual age of 16 with a mental age of only 9. Another was 12 years old with a mental age of 7. In every one of these cases the teacher knew, of course, that something was wrong, for all were retarded in school, but that it was true feeble-mindedness was never suspected except in the first instance, and even here it was not understood by parent or teacher that the child was practically noneducable. On the other hand, a boy of 14 was considered feeble-minded by his teacher when he was only a misfit.

Every village and city school system visited in Minnesota by the writer has produced cases of retarded, feeble-minded children, and where there was time to make any sort of adequate study of the question the proportion has appeared to be just about that estimated by Goddard, viz, 3 per cent.

The following types of exceptional children require careful attention on the part of teachers: (1) Retarded children (especially those retarded two or more years); (2) slow children (not necessarily retarded); (3) precocious children (especially those who are delicate); (4) delinquent children; (5) misfit children; (6) highly nervous children.

In order to decide whether a child is actually deficient in mentality, some competent teacher in every school system should familiarize herself with the Binet method for measuring the intelligence of children. Such a teacher need not be expected to become an expert or to obtain very exact results, but she may at least in the majority of cases arrive at a conclusion which will establish the fact of feeble-

mindedness or normality. The exact degree of feeble-mindedness present in a child is a matter for a clinical psychologist or school medical officer to determine, but this, though desirable, is not always indispensable knowledge in the practical classification of school children.

There are several methods by which a teacher may acquire the knowledge necessary to fix the fact of feeble-mindedness, if present, or other peculiar mental conditions.

First. The teacher may attend a few weeks' course of study at such places as Vineland, N. J., under Dr. Goddard; Philadelphia, under Dr. Witmer or Dr. Holmes; or Faribault, Minn., under Dr. Kuhlmann.

Second. The teacher may obtain some training at various universities, especially at Stanford, Johns-Hopkins, University of Pennsylvania, University of Minnesota, University of Pittsburg, and some others.

Third. The teacher may under some circumstances (if her previous training has been adequate) learn a good deal of practical value through the literature of the subject. For this purpose she is referred to the brief bibliography on the mental study of children given on page 54.

In every school system the superintendent, principal, or some teacher with special aptitude should take up in some way the study of the exceptional child, understanding, of course, that the results obtained are merely relative, not exact, but that they furnish, nevertheless, a better basis for classification than any other now available.

A word of caution is required. Do not depend upon the Binet or any other method exclusively. Use common sense. Do not disregard ordinary school methods of judgment. Do not regard the Binet Scale as one which can be used with the certainty of a measuring stick. Make use of any and all methods available in the estimation of the intelligence of exceptional children. Finally, regard your conclusions in most instances as tentative, and carefully watch the development of each case.

The other types of children mentioned, viz, the dull, precocious, nervous, and misfit, require as careful study as the feeble-minded. Indeed, they deserve perhaps more attention, because these are the types which under proper discipline make satisfactory progress, and may be saved years of unnecessary sorrow and ineffective effort.

In Minnesota during the school year of 1912-13 several school communities have undertaken the study of exceptional children with a marked degree of success. Among these should be mentioned Faribault, Owatonna, Cloquet, St. Peter, Austin, Hibbing, Minneapolis,

Duluth, and Rochester. The five normal schools located at St. Cloud, Mankato, Winona, Duluth, and Moorhead are also undertaking some effective study of the subject of mentally divergent children. The excellent beginning thus made should be extended to every school district in the State and in other States as well. When this is done, the schools will not only be relieved of a tremendous drain upon their daily efforts, but a large sum of money will be saved every year in avoiding the expense of carrying hopeless repeaters. That sum might well be expended for the special education of pupils who receive little or no profit from the ordinary public schools.

PART II.—STATE ORGANIZATION OF SCHOOL HYGIENE IN MINNESOTA.

In order to guide and assist local school health departments, whether organized by boards of education or boards of health, we should have State divisions of child hygiene under the various State boards of health in cooperation with the department of public instruction. Minnesota is at the present time the only State that has thoroughly organized such a division.¹ In this State the work is carried out under a special director of school hygiene who, under the direction of the State board of health, maintains a clearing house of information at the office of the board and travels about the State in the interests of the work.

The general procedure of the director at each place visited is as follows:

1. A general meeting with all the teachers of the local school system, at which are explained methods for the physical observation of school children. At these meetings practical demonstrations or clinics are held with one or more grades of school children present, usually a fourth or fifth grade.

2. Individual demonstrations to the teachers at the various grades in different schools.

3. Examination of special cases.

4. A second meeting with all the teachers for the purpose of discussion of the results of observations in the grades.

5. An open meeting devoted to the interests of parents of school children.

6. Inspection of school buildings and premises.

7. Organization of the study of mentally deficient children.

8. Recommendations for health promotion addressed to the board of education and adapted to the conditions discovered.

9. Aid furnished in organizing school health departments according to one of the three or four standards which have been adopted.

10. At normal schools short courses in child hygiene are given.

The following letter, which was sent to the various school superintendents of Minnesota, will explain the purposes of the campaign for

¹ Virginia has since 1912 undertaken limited State health supervision.

school hygiene undertaken by the writer of this report, under the direction of the executive officer of the State board of health:

RELATING TO HEALTH SUPERVISION OF SCHOOL CHILDREN.

STATE BOARD OF HEALTH,
St. Paul, August, 1912.

The State Board of Health and the Department of Public Instruction of Minnesota wish to lend their aid to the schools of the State in promoting health supervision of school children. To this end, the State Board of Health has engaged the services of Dr. Ernest B. Hoag, formerly of the University of California and at present on leave of absence from Stanford University, to help Minnesota towns and cities to organize health work in schools.

Dr. Hoag will travel about the State, spending from one day to several days, as may be required, in the various places needing his services.

It is proposed to demonstrate to towns, cities, and counties that rational conservation of the mental and physical health of our school children is possible and practical with the means already at hand. Three plans will be proposed:

(1) Organization with a medical officer and nurse or nurses.

(2) Organization with school nurse or nurses only.

(3) Organization by the employment of a simple nonmedical health survey on the part of the teachers only. Such a survey is provided by a series of questions based upon ordinary observation of physical and mental conditions. The outline for this purpose will be furnished by the State Board of Health—one for each child. No community need wait for the employment of a medical officer in order to begin sensible health observation of school children.

Dr. Hoag will be available for lectures on child hygiene, medical supervision, and related topics, for clubs, institutes, and various other organizations. The State Board of Health will maintain in its office in the Capitol building, St. Paul, a clearing house of information concerning child hygiene, medical supervision, the teaching of school hygiene, sex hygiene, and the like. Please make full use of the opportunities furnished in this new work. Your cooperation is earnestly desired.

For further information address Dr. H. M. Bracken, Secretary, State Board of Health, St. Paul; or Mr. C. G. Schulz, Superintendent of Public Instruction, St. Paul.

Requests for assistance in organizing departments of school hygiene and health supervision were received from a large number of towns and cities, and from these the secretary of the State board of health selected 67 to be visited by the special director of school hygiene. It was found quite impossible to meet all the requests from the various superintendents of the State, and it was evident from the beginning that the demand for aid in health organization in schools was far greater than could be met by any possible means at hand. It was, therefore, decided to select in the main the larger places of the State, in order that the influence of the work might extend as widely as possible.

In order to indicate the usual methods of procedure, several reports of the director to the secretary of the board are here given.

RECORD OF TRIP TO GRAND RAPIDS, MINN., AUGUST 28-30.

Population, 2,600.

I left St. Paul Tuesday, August 27, arriving at Grand Rapids on the 28th, to lecture at the Itasca County Teachers' Institute.

On the afternoon of August 28, a lecture was given to the teachers assembled on the topic, "The Health Grading of School Children." The teachers were much interested in the plan proposed, which was as follows:

(1) A series of leading questions to be answered by the pupils themselves when old enough, and when not old enough by their parents, concerning their own physical condition, these questions to be answered on blanks furnished by the teacher and given to her by the State board of health.

(2) A series of questions, nonmedical in nature, depending merely on careful observations, to be answered by the teachers themselves on the same blanks as above mentioned.

The teachers showed a disposition to cooperate heartily in this plan. They were told that they could receive the blanks mentioned at any time upon application to the secretary of the State board of health.

In the evening of the same day a public lecture was given which was attended by both the people of the village and the teachers. The subject of the lecture was, "The Physical Observation of Children," and it was illustrated by lantern slides. Interest was shown in this lecture by the fact that a considerable number of questions were asked by those present.

On the morning of August 29 a lecture was given on the topic, "How to Teach Hygiene in Schools." A plan was proposed by which textbooks are to be used largely as reference guides, but the course is to be based upon common sense application of health principles to local needs. It was announced to the teachers that an outline for such course had been prepared and would be furnished later by Mr. C. G. Schulz, superintendent of public instruction.

Relating to medical supervision of schools.—Prof. Freeman, district superintendent of schools in Itasca County, held a conference with me in respect to the organization of medical supervision in the schools of Grand Rapids. He stated that \$1,000 was available, in addition to the services of a district nurse, for this work. He requested information on how to make the best use of the money available. The following plan was proposed to him:

That he base the salary of a school physician on the rate of \$1 per pupil and expect of this physician a complete health survey of all school children, with a careful record for each child; and in addition a general supervision of the sanitation of the school buildings and grounds and such special work as he may be called upon to do by the superintendent of schools, particularly in respect to communicable diseases and the unhygienic conditions of the children as relating to certain parasitic conditions of the skin and head.

It was proposed to Prof. Freeman that the person appointed to the office of school physician ought to be allowed sufficient money to cover the expenses of a visit to St. Paul, Minneapolis, and Milwaukee, in order that he might make a thorough study of health supervision of schools in the three cities, and it was further suggested that he consult with Dr. Keene, of Minneapolis, the State board of health of Minnesota, and Dr. Barth, of Milwaukee. Prof. Freeman assured me that the plan as outlined above would be put into operation. I feel that Grand Rapids is to be congratulated on its plan for organizing what seems to me an ideal method for a village of its size, and I hope that

other villages of similar size will take this plan into consideration in respect to their own needs.

[NOTE.—In September medical inspection of the Grand Rapids schools was organized and placed in the hands of four local physicians. This is not an ideal plan, as there is no one person responsible for the work. An investigation of the work done by these physicians was made by me in November, and it is only fair to say that they had examined every pupil in the schools, made careful records on card copies from the Duluth plan, and had in general accomplished much good.]

RECORD OF TRIP TO HIBBING, MINN., NOVEMBER 11–13.

Population, 15,000.

The Hibbing schools were visited on November 11 to 13, inclusive. The teachers were met as usual and the use of the Outline explained to them, and afterwards 14 grades were visited and the children in those grades observed. About 20 special cases were called to my attention by teachers, and these were given a thorough examination, and proper recommendations were made to suit each individual case. I found a special teacher employed in the Hibbing schools for the study of retarded pupils. This teacher has had extensive training, is competent, and is accomplishing much good. Her special effort is, first of all, to distinguish between retarded children who are curable and retarded children who are incurable—in other words, to distinguish between dull and mentally defective children. She is thoroughly familiar with the use of the Binet system, and already has made use of it in connection with a large number of children. The effort at Hibbing is to give the individual child as much attention as possible and to provide proper education for mentally peculiar children, whether their condition is due to dullness or mental defectiveness. Two ungraded rooms have already been established, and the teacher of one of them has had unusual opportunities for the study of children of this type. Children in the Hibbing schools are advanced by subjects rather than grades. Therefore each grade is divided into several divisions, sometimes as many as four or five, in order to make this form of promotion possible. Taking everything into consideration, the school system at Hibbing is the best that I have yet had the opportunity to observe.

In respect to sanitation the schools are in excellent condition. Hibbing schools are provided with medical inspection, and for this purpose have employed Dr. Lea for his full time, paying him \$1,800 per year for his services. The doctor occupies three rooms in the high-school building—a waiting room, a consultation room, and an emergency room. The equipment of the medical officer is the most complete I have seen in any school, either in Minnesota or elsewhere, and leaves nothing to be desired. The equipment includes practically everything that would be found in a modern physician's private office. The schools have spared no expense in this equipment. It includes a complete laboratory outfit of the very best sort; apparatus for the examination of the eyes, ears, nose, and throat, such as is used by specialists; a hospital bed ready for occupancy in case of emergency; an operating table for use in case of accidents; and a well-equipped medical library. The medical officer spends several hours each day in his office, so that teachers may send pupils to him for examination. During the rest of the time he visits schools in the district, which covers a very considerable area. Free medical treatment is given to school children by the school physician of Hibbing in such cases as are unable to secure regular medical attention.

The following suggestions were made in respect to the present medical inspection system at Hibbing:

(1) A school nurse should be employed at once, for it is apparent that notices sent to parents by the school physician receive very little response. This is explained to a large extent by the fact that there is a large foreign element. A school nurse who has had some training in social service work could accomplish wonders in this community.

(2) The purchase of about 20 books for the school physician's library on subjects pertaining to school hygiene was recommended; also subscription to a number of journals on the same topic.

(3) It was recommended that the teachers cooperate to a greater extent with Dr. Lea by making use of the Health Outline provided by the State board of health, so as to relieve him from the necessity of examining a great many perfectly normal children, and also to acquaint the teacher more fully with conditions present in her own room.

(4) It was demonstrated to the teachers that the use of the Health Outline would provide them with information about conditions in respect to the school children which would form the best possible basis for practical hygiene instruction.

All of these suggestions were accepted by the superintendent of schools and will, it is believed, soon be put into effect.

I was requested to spend two days more in the Hibbing schools in the near future to make an examination of special cases and to offer suggestions relating thereto. The conditions of the homes of the children in the Hibbing schools are, in many instances, bad. For this reason more careful attention should be paid to proper hygiene here than in most schools, and there is urgent necessity for the services of a reliable and tactful school nurse.

RECORD OF TRIP TO CHISHOLM, MINN., NOVEMBER 14-15.

Population, 7,685.

I visited Chisholm on November 14 and 15. In respect to the sanitation of the Chisholm schools there is nothing to recommend. They are in every respect all that could be desired. Not a single room was lacking in proper ventilation or proper lighting, and all other sanitary conditions meet the highest possible requirements of a school system. I found paper towels in use, individual soap containers, sanitary sweeping employed by the use of oiled sawdust, a perfect system of ventilation by the direct-indirect method, ventilated coat closets, lighting in every case sufficient and from the left side, halls splendidly lighted, walls tinted in the most desirable manner, and altogether the schools most attractive and artistic. The attention of all the other schools of Minnesota ought to be called to the ideal sanitary conditions existing in the Chisholm schools. The only point which could be criticized was that of temperature. Some of the rooms registered a temperature of 74 or 75, which is 6 or 8 degrees higher than desirable.

The employment of a social service school nurse was recommended and the idea was favorably considered by the board of education.

RECORD OF TRIP TO MANKATO, MINN., OCTOBER 15-24.

Population, 11,000.

Mankato was visited October 15 to 24. In addition to the usual preliminary meeting with teachers, a second meeting after the demonstration of work in the grades was held for the discussion of results obtained. All of the grades

in the schools above the second were visited by Supt. Sperry and myself. A parents' meeting was held in the high school the evening of October 16. As the audience was small, the occasion was turned into a round-table discussion, in which I was called upon to answer many questions. Five lectures were given to the senior class of the normal school on the general subject of "Physical observation of school children."

All of the grades in the normal training school above the second were visited in the usual way. Demonstrations were given before the teachers of the normal training school.

Most of the schools of Mankato were built many years ago, and therefore are open to criticism from a sanitary point of view. While the ventilation is good in nearly every instance, the lighting is frequently bad. It was interesting to notice, however, that the paper towel, the liquid soap dispenser, and the drinking fountain were installed everywhere. The janitor service seemed to be excellent.

One of the principals in Mankato has undertaken to make a special study of the mentally peculiar child and for this purpose is to make use of the Binet system after some instruction from me. Personally, I observed in the Mankato schools eight mentally defective children.

Mankato needs the services of a school nurse on full time. It would also be very desirable if an arrangement could be made with the local health officer, who is not in the practice of medicine, to devote a portion of his time to health work in schools. The present health officer is admirably adapted to this sort of work.

THE USE OF THE HEALTH OUTLINE.¹

The Outline for the Health Grading of the School Child was put into use in every town and city visited. Teachers have found it easy to use, and requests for copies of it have been received from nearly every State in the Union, indicating that schools everywhere are looking for methods of health observation which teachers can readily employ.

In order that teachers might understand the significance of answers received to the questions of the outline, the following explanations were given in some detail at meetings held with the teachers:

SUGGESTIONS FOR USING THE OUTLINE FOR HEALTH GRADING.

1. Call the pupils, one at a time, to the desk. Begin with Part I, and ask the questions as they appear in the outline and write the answers yourself. One can get a great deal of information by noticing how the pupil answers the question. Mistakes in answers may often be corrected in this way, when they would not be observed if the pupil were to answer the questions himself in his own writing at his seat. Do not suggest the answer.

2. In asking questions about headache and earache or any other questions where the word "frequent" appears, use the word "frequent" as meaning once a week or oftener.

3. Be perfectly sure that the pupil understands the question, and test his answer in a number of different ways where you have any reason to doubt the reply given.

4. It is desirable to have the Outline for Health Grading completed for every pupil in your room before the arrival of the visiting physician (if there is one).

¹ See also p. 16.

5. After the completion of the health grading in your room, on your part, make a list of the pupils who you think ought to receive further examination by a physician or nurse. Where only the minor difficulties are discovered, it is not necessary to call the attention of a physician to these points, although it may sometimes be necessary to inform the parents of what you discover by means of the blank notice. Do not place any pupils on the list to be examined by a physician unless you have a definite reason for doing so.

6. Make a list of all the retarded pupils in your room, and of this number indicate those whom you suspect of being mentally deficient.

SIGNIFICANCE OF THE ANSWERS TO THE QUESTIONS OF PART I OF THE OUTLINE.

The answers in Part I will furnish information on the following points: (1) Retardation, (2) influence of previous sickness on present condition, (3) relation of home habits to individual health, (4) condition of the teeth, (5) condition of the eyes, (6) condition of the ears, (7) condition of the nose, (8) condition of the throat, (9) amount of work done out of school, (10) food habits.

Defective teeth.—If a child in the third grade or above has never been to a dentist, it is presumptive evidence in most cases that his teeth are defective. Testimony of aching teeth always indicates defective teeth; sound teeth never ache.

In nearly every room it will be noted that several pupils make use of a family toothbrush. Nothing could more effectually spread disease than this practice. Practically every disease that we know is spread by the secretions of the nose and throat. This clearly indicates the danger from the use of the common toothbrush.

Chronic headache.—Chronic headache in school children is usually caused by one of the following conditions: (1) Eyestrain; (2) indigestion; (3) constipation; (4) auto-intoxication, or absorption of the products of fermentation from the intestines; (5) decayed teeth; (6) bad ventilation at home, or at school, or both; (7) malnutrition; (8) adenoids.

Although there are some other causes of headache, they are so infrequent as to be negligible here. Of the above causes given, eyestrain, constipation, and auto-intoxication are probably the most common.

Eyestrain.—Blurring of the print always indicates some form of visual defect and is therefore positive evidence of eyestrain. It is always well to ask if the pupil habitually sees double; also if he notices spots before the eyes, if the letters appear to move, or if he sees colors.

Earache.—Chronic earache always indicates more or less serious trouble. It means that inflammation is present in the ear. In many cases earache is due to the presence of adenoids. Adenoids are thus often indicated by earache. Earache, if not corrected, very frequently leads to more or less permanent deafness.

Discharging ears.—This condition is more serious than earache and indicates that the disease process in the ears is advancing rapidly. The condition should always be treated at the earliest possible time. Always test the hearing of pupils who have earache or ear discharge by means of the watch tick or whispered words. As a check in this test, always test children with normal hearing at the same time.

Difficult nasal breathing.—Children who complain of constant difficulty in breathing through the nose usually have adenoids. Sometimes the obstruction is in the nose itself and in this case is due to enlarged turbinates or polypi. Many children with adenoids will say they can breathe easily through their noses simply because they have never breathed normally and do not, therefore, know

what nasal breathing means. Inquire if the child's mouth is usually dry when he wakes in the morning.

A frequent sore throat.—This condition nearly always indicates diseased tonsils, and diseased tonsils should always receive prompt attention. If the tonsils are much enlarged, adenoids will nearly always be found present. On the other hand, adenoids are often found present when there is no enlargement of the tonsils. Rheumatism is often associated with diseased tonsils. So-called "growing pains," stiff neck, and tender aching joints are common symptoms of rheumatism.

SIGNIFICANCE OF ANSWERS TO PART II.

General appearance.—There are many reasons for poor general appearance. The most common is probably general malnutrition, due commonly to insufficient food, or the wrong variety of food, or the wrong use of food. Some other causes are the following: Adenoids, diseased tonsils, bad ventilation, very rapid growth, tuberculosis, a recent sickness of some sort, very defective teeth.

Peculiarities in posture, walk, etc.—These conditions may be explained in general by weak muscles, due to rapid growth; spinal disease; flat-foot or broken arches; rickets; tuberculosis; paralysis from some serious disease, such as infantile paralysis, meningitis, or diphtheria.

Mental condition.—A child who is two years or more retarded in school, who does not play normally, who is not mentally alert, should always be suspected of being mentally deficient. He should be tested by the Binet method. It is necessary to distinguish between merely dull and mentally deficient children. Many mentally deficient children show none of the physical signs of such a condition, and they may be the best looking children in the class. Be careful not to overestimate the intelligence of the old, mature child who is two or three years retarded, even though he does fairly good work in a class of much younger, less mature children. He must be judged by the ability of children of his own age and not by children younger than himself.

Nervous condition.—Stammering is nearly always a nervous condition and not usually due to physical defects. Nail-biting is almost never a mere habit, but is caused by an unstable condition of the nervous system. Spasmodic movements should always be carefully observed, as they often indicate St. Vitus dance or habit spasms. True hysteria is very seldom observed in school children. General nervousness is indicated by a lack of repose, too much emotion, and inability to keep quiet, and may be due to a large number of causes. Sometimes the home conditions will offer the explanation. Often the child is from a nervous family. Sometimes it is due to bad sexual habits, but more often the sexual habits are due to an unstable nervous system. So-called "bladder trouble" is practically always a sign of general nervousness and usually has nothing to do with the condition of the kidneys at all.

Nose and throat.—Adenoids are usually indicated by a nasal voice, frequent colds, crooked and prominent teeth, mouth breathing, and mental dullness. Not all of these conditions are always present, but some of them are. Adenoids and enlarged tonsils are usually associated.

Ears.—Never forget the relation between adenoids and earache, discharging ears, and deafness. Constant bad spelling sometimes indicates deafness.

Eyes.—Children with crossed eyes always have a defect of vision, and the crossed eye will in time usually become blind or nearly so. These children should have properly-fitted glasses at the earliest possible moment. This will often straighten the eyes and save the sight. Defective eyes are often indicated by red lids or red eyes, blurred vision, or double vision. The teacher should test the sight of each child by using the Snellen test type.

Skin.—Any sudden eruption should always be noted, as possibly indicating a contagious disease, such as measles, chickenpox, scarlet fever, or the like. No sort of skin disease should ever be ignored. The cause of it must be discovered.

Examine the teeth of the children.—Stand in a good light, have the children file past you and open their mouths as widely as possible. Take a quick look at all of the teeth and make a note of each child who has defective teeth. It is not necessary to note the number of such teeth as every defective tooth ought to receive immediate attention.

Some general observations.—Try to discover what children always have coated tongues. This is almost always due to constipation. Try to correct this condition among children, as it is extremely common and usually receives very little attention at home.

Attempt to learn the home habits of the children under your care. You will be surprised to learn how many keep very late hours. Try to learn the cause for this. Try to learn how many children eat candy every day. Talk to them about bathing habits and learn what their habits actually are in this respect. Make a list of the children who live in families where there is chronic sickness and discover what the sickness is. Always be on the alert for signs of children's contagious diseases, when they first manifest themselves. Use the information obtained by the outline for practical teaching in matters of hygiene in your particular room. This will furnish a more effective basis for useful health teaching than anything else.

The State board of health offered to schools that desired to organize school health work blanks for recording examinations. It is important that school health records be standardized, and it was therefore recommended that the record cards furnished by the State board of health be employed in all schools about to organize health supervision. The record cards as furnished by the board are reproduced below.

Either a general health survey or a school clinic was carried on in every school community visited. In general the results of these surveys and clinics are very similar, and for this reason it is not considered advisable to publish all of the results obtained by the director of school hygiene during the year's campaign. The statistical results obtained in five typical cities follow:

School health surveys.¹

OWATONNA.

Number of pupils.....	34	24	39	27	34	35	45	28	38	32	46	35	27	127
Grade.....	3	3	3	3	4	5	5	5-6	6	6	7	7	7-8	8
Coffee.....(pupils using)...	23	11	32	18	27	28	26	20	28	28	33	28	19	105
Tea.....	13	10	18	9	5	10	10	19	9	14	10	19	6	56
No ventilation in bedroom.....	15	17	26	12	16	25	24	13	10	21	0	1	4	20
Headache.....	8	5	14	13	10	13	6	7	16	3	17	6	8	22
Poor vision.....	9	3	0	7	8	4	6	5	5	7	6	6	3	14
Double vision.....					1					1		1	1	1
Earache.....	4	4	2	11	4	8	7	3	7	7	0	5	0	3
Running ear.....	1	2	0	2	2	2	4	0	5	2	0	1	0	2
Poor hearing.....	6				0	0				4		1		9
Diseased tonsils.....		1	1	5		8	2		2	1	5		4	12
Nasal obstruction.....		3	5	10	0		5		7	3	12		1	15
Daily use of toothbrush.....	22	10	16	7	15	14	15	9	6	21	7	27	11	
Toothache.....	9	7	20	11	20	15	9	11	11		9	10		15
Common toothbrush.....	6	7	14	0	5		1							
Bad teeth.....		22	29	18	22	21	23	12	22	12		15	10	36
No form of proteid for breakfast.....	18		20	18	22	17	42	23	33	16	36	30	25	
No fruit for breakfast.....	25		24	16	27	20	31	24	32	28	28	35	23	

¹ Blank spaces indicate that the question was not asked or the examination was not made.

School health surveys—Continued.

CHISHOLM.

Number of pupils.....	41	31	28	40	37	36	37	35	36	30	29	21	24
Grade.....	3	3	3	4	4	5	5	6	6	7	7	8	8
Coffee.....(pupils using).....	36	26	24	37	34	32	33	27	34	24	20	20	18
Tea.....	15	21	13	21	22	22	7	8	17	21	11	6	19
No ventilation in bedroom.....	32	12	23	24	21	22	31	21	22	14	2	8	5
Headache.....	6	6	3	---	12	6	16	6	15	8	8	5	4
Poor vision.....	0	0	7	0	5	0	10	11	5	0	0	2	2
Earache.....	1	2	5	6	1	3	6	0	3	0	1	0	3
Running ear.....	1	2	3	3	0	2	0	0	1	0	0	0	0
Poor hearing.....	0	4	---	0	---	2	1	0	2	1	3	1	2
Nasal obstruction.....	0	---	---	4	---	4	6	2	8	2	1	3	2
Toothache.....	---	8	9	22	13	15	22	11	17	10	4	8	12
Double vision.....	---	---	---	3	---	---	6	---	2	2	---	---	---
Common toothbrush.....	5	8	8	7	11	14	7	11	14	---	---	---	---
Bad teeth.....	21	22	21	32	30	19	26	20	17	14	11	9	11

HIBBING.

Number of pupils.....	24	26	31	26	32	28	37	30	38
Grade.....	3	3	3	3	4	4	5	6	6
Coffee.....(pupils using).....	21	23	16	16	28	15	29	23	30
Tea.....	2	2	9	1	12	6	2	10	7
No ventilation in bedroom.....	21	22	23	22	16	17	30	12	13
Headache.....	---	5	2	2	5	3	16	4	13
Poor vision.....	2	0	1	---	2	0	2	5	13
Earache.....	1	0	3	0	8	2	6	2	4
Running ear.....	0	0	2	---	4	0	1	0	2
Poor hearing.....	0	---	2	---	1	---	1	1	2
Nasal obstruction.....	---	---	---	---	5	2	3	1	3
Toothache.....	9	5	9	6	10	2	16	7	9
Double vision.....	---	---	---	---	2	---	---	2	1
Common toothbrush.....	---	2	---	5	---	---	---	---	---
Bad teeth.....	23	21	21	22	23	22	21	18	24

FARIBAULT.

Number of pupils.....	29	33	28	29	20	30	27	34	24	28	19
Grade.....	3	3	3	3	4	4	5	5	6	7	8
Coffee.....(pupils using).....	20	22	22	21	12	18	20	29	16	17	16
Tea.....	8	13	8	7	8	13	13	14	1	8	5
No ventilation in bedroom.....	15	11	8	18	11	20	10	---	14	6	6
Headache.....	10	17	19	8	1	9	9	---	4	11	0
Double vision.....	1	---	---	---	---	---	---	1	1	---	---
Poor vision.....	6	5	5	0	---	0	1	3	1	2	0
Earache.....	3	7	3	12	0	3	5	7	3	3	1
Running ear.....	1	2	0	6	0	0	1	0	3	0	0
Poor hearing.....	---	7	---	0	---	---	0	0	2	2	---
Diseased tonsils.....	4	2	---	---	3	5	3	2	4	6	0
Nasal obstruction.....	---	3	1	---	2	5	3	4	1	4	3
Daily use of toothbrush.....	12	18	13	8	9	9	8	8	16	---	19
Toothache.....	16	14	17	17	7	9	12	---	---	9	0
Common toothbrush.....	2	4	1	5	1	3	---	---	---	---	---
Bad teeth.....	19	31	20	24	11	20	23	17	17	3	3
No form of proteid for breakfast.....	20	19	19	22	6	19	11	30	13	20	19
No fruit for breakfast.....	25	16	25	17	13	28	24	34	15	27	15

RED WING.

Number of pupils.....	23	36	34	31	29	24	48	38	30	75	27	29	61
Grade.....	2-3	4	3-4	4	4	4	3-4	4-5	(1)	5-6	6	7	7
Coffee.....(pupils using).....	15	27	29	25	26	22	41	27	27	63	24	25	43
Tea.....	6	14	11	7	9	7	13	13	6	28	9	13	11
No ventilation in bedroom.....	6	18	23	20	22	15	35	24	17	26	14	0	29
Daily use of toothbrush.....	11	9	9	12	0	4	12	11	10	24	8	10	21
Common toothbrush.....	2	4	6	---	6	---	5	---	---	---	---	---	---
Toothache.....	10	---	22	8	20	10	31	22	9	42	16	13	25
Bad teeth.....	18	19	23	7	22	14	31	16	12	37	15	14	21
Headache.....	5	8	6	13	2	0	12	13	5	14	10	5	10
Earache.....	3	2	6	16	8	1	10	8	1	8	5	0	5
Running ear.....	0	0	2	1	0	1	3	3	0	3	5	0	0
Poor hearing.....	0	1	0	0	---	---	---	---	---	1	2	---	3
Nasal obstruction.....	2	3	3	4	0	1	0	4	0	11	3	1	2
Diseased tonsils.....	---	2	---	1	0	2	1	---	1	6	2	---	2
Poor vision.....	1	10	3	---	1	0	7	6	0	20	4	3	0
Double vision.....	---	---	1	---	---	---	2	---	---	---	---	---	---
No form of proteid for breakfast.....	11	20	29	---	19	12	37	---	20	---	18	16	45
No fruit for breakfast.....	16	30	31	---	27	22	42	---	25	---	13	22	55

¹ Ungraded.

SCHOOL CLINICS.

During the first part of the year's campaign the "Health survey" plan was followed and from 200 to 700 pupils were "surveyed" in each school community. The director, accompanied by the superintendent of schools, visited as many grades as possible, for the purpose of demonstrating health conditions to the individual teachers and in order to observe the sanitary conditions present in the various rooms.

This plan, although valuable, proved too irksome and time-consuming and was accordingly supplanted by the "School clinic" method.

From 50 to 150 pupils from various grades were assembled in the presence of all of the teachers of the grades. The director in charge of the "clinic" then proceeded to demonstrate the health conditions of the pupils selected for examination. To indicate exactly how the demonstration, or "School clinic," was carried out, a report of the clinic at Albert Lea is given here.

THE SCHOOL CLINIC.

THE DIRECTOR.—The object of this demonstration is to show teachers how easy it is to detect the ordinary physical defects from which children suffer. Most people have an idea that it is necessary to have an expert go into the schools to find these handicaps, but as a matter of fact any teacher after a little instruction in the matter can readily learn how to discover the ordinary handicaps almost as well as any expert can. Only the larger places in the country have any health supervision of schools that is really worthy of the name, and the reason is that they think only experts can do the work. Now, as a matter of fact, all the schools everywhere need to have this sort of health work, and the only way they can obtain it in many instances at present is to have the teachers themselves attack the problem.

The ordinary handicaps that we find in children are pretty much the same everywhere we go, whether it is in a California town or in a Minnesota town; and the proportion of the defects that we find is practically the same everywhere, so that I could say in advance in this place just about how many cases of adenoids will be found, how many cases of visual defects, how many of chronic earache, how many of headache, how many of defective teeth, etc.

We are not looking for sick children in the schools, as that word is ordinarily used, and we do not often observe sick children, as a matter of fact, but we do find a very considerable number of children who have physical or mental handicaps which interfere with their school progress, and it is these handicaps which we wish to discover and, if possible, to have corrected. We do not realize, for instance, that a large number of children suffer from chronic headache who never say a word about it unless they are questioned. They take it as a matter of course, and they become accustomed to such chronic headache. We do not realize that a very considerable proportion of children have more or less chronic earache, and yet never mention it unless the earache is so bad that they can not sleep at night. We do not realize that a large number of children have toothache, some of them most of the time; that they have visual defects, so that in many cases they do not read comfortably or well. They suffer from various handicaps of this sort and never say anything about it, simply because they are accustomed to the condition and very often know no other; in other words, they have no perspective; they have no standard except their own. Children in the main never complain about their physical handicaps unless they are so serious as to actually make them sick, and this is a point which we must always remember in dealing with them.

Now, what I want to do here this afternoon is to ask these 85 children some very simple, common-place questions, just as I should like to have you do with your children in the various grades, and the answers to these questions will indicate pretty accurately the sort of physical handicaps which are present. I shall have to ask the questions of the whole group and not take down any individual names, but you teachers ought to follow pretty much the same process and also to record each child's examination separately, and make it a permanent school record.

As a matter of fact, at least 25 per cent of school children have visual defects of one kind or another. These are ordinarily discovered by the use of the test-type card, but without any card or apparatus of any sort you can still discover a very considerable number of eye defects by a simple question. In order to demonstrate this point I am going to ask these children the question and they will answer by rising, and the question is this—now, Children, I want you to listen carefully and do not answer until I am all through: How many of you notice that when you read in your books the print is hard to see or that it often looks dim, or perhaps crooked, or that you see two letters instead of one, or two lines instead of one, or that in some way you find it hard to read?

The number of children who are standing is 18, and we shall now try to discover by some further questions whether these children really know what they are talking about or not. The children will give answers of a certain type, and these answers will be exactly such as children give in other places and almost in exactly the same words, for the simple reason that they have the same defects that children in other places have. I shall ask the teachers to listen carefully to the responses which are made when we ask the children about their eyes.

I am going to ask this boy now how the print looks when he reads in his book. He replies that "it looks blurred." The next boy says that the print "looks dark," but I am going to ask him what he means by "dark." He replies that he can not see it, and I notice that he is troubled with what is technically called "squint eye" or crossed eye. Let us ask him if he ever sees letters or lines double. He says that a good deal of the time he does see letters and lines double, which is nearly always the case in instances of this sort. I want to say to the teachers right here that cases like this ought always to receive the promptest kind of attention, because the vision in the crossed-eye deteriorates rapidly; and in many cases, if glasses are not properly fitted before the child is 8 or 9 years of age (and often earlier) the vision has already gone to the extent of 50 to 100 per cent. I shall test this boy's vision and see how much he still retains in the crossed eye. I have tested him by first standing away about 20 feet and holding up my fingers and having him tell me the number he sees. He fails absolutely at a distance of 20 feet; then he fails at a distance of 15 feet, and he continues to fail until I get within 9 feet of him. At this distance and in a strong light he can tell how many fingers are held up in front of the crossed eye. This shows that his vision has very greatly deteriorated in this eye. If glasses had been properly fitted to this boy's eyes several years ago, most of the sight could have been saved, and this very well illustrates how absolutely necessary it is to correct the vision in any child who has a tendency to crossed eye. If glasses are put on early the eyes will, in the majority of cases, be straightened without any operation; and most of the vision, if not all of it, will be retained. I have just asked the boy how long he has been wearing glasses. He is 11 years old, and he says, "Only a little while." The trouble is that the glasses were procured too late.

I have just asked a little girl how the print looks to her, and her reply is that when she looks in her book she sees "two lines just the same." This is another case of "squint eye" or crossed eye. I shall test her eyes in the same manner that I did the boy's. This child's vision is exactly the same as that of the boy. She reads figures at a distance of about 9 or 10 feet.

The next child that I question about her eyes says that the print "looks blurred and runs all together."

The next little girl replies, when I question her about the print, that "it blots," which is a perfectly characteristic answer, given by a great many children in different places, and has a definite significance to anybody who understands the eye.

The child now before me says the print "looks light," and by that she means that it appears dim and is not sharp and clear-cut. She probably has a case of astigmatism.

Still another child replies that the print "looks crooked," which is also a very common reply.

The next child has just told me what I suppose 100 children, at least, have said. She remarks that the print "looks upside down." By that she doesn't mean that it is actually upside down, but that it is turned around a good deal.

This little girl now before me gives a very interesting and definite answer. She says, "The print looks like it wasn't there, and I am always skipping words." There is no question at all about the fact that she has a definite visual defect.

The boy I am now questioning says the lines "look double." He has what we call "muscular unbalance."

The next child says that after he has looked at the book a little while he sees "two lines instead of one."

Another child says that "some of the letters look big and some look small."

This child that I am now questioning gives another very interesting answer, which is definite and significant. He says that "some of the words look light and some of the words look dark," which is just as clear a diagnosis of astigmatism as can possibly be given by any doctor.

The little girl now questioned says that the words "look blotted and some look lighter than others," and "I often mispronounce words because I am not sure what the words are."

The next child says, "When I study, the words all run together, and then it gets black."

Here is a boy who tells me that he always reads the same line twice, and he does not know why he does it; and when he reads at home "in magazines and things" he gets a headache, which is a very clear indication of eyestrain.

The next boy says "the words look dim and shaky." A great many children complain that the words move or jump.

I shall not repeat all of the remainder of the responses which the children will give, but shall pass on in the examination hurriedly.

What I want you teachers particularly to notice is that, with two exceptions, all of the children of the 18 questioned give prompt and definite replies as to how the print looks to them, and that their answers give evidence that there is some real defect present. Two of the answers were very vague, and the children merely repeated what they heard other children say. You can always be sure that in such instances there is little or no trouble. If a child has a visual defect that amounts to very much, it can ordinarily be brought out by the sort of response which he gives to the question about his eyesight.

We will now make a short demonstration of how to test the vision by use of the Snellen Test Card.

In order to make this test, place the eye-test card in a good light, being sure that the child is not facing the direct sunlight. Measure off a distance of 20 feet. Hang the card on the wall nearly on a level with the child's eyes. Cover one eye with a piece of cardboard or an envelope. Never allow anything to press on the eye, or it will interfere with the vision for several moments. Testing one eye at a time in this manner, ask the child to read the line on the card which is marked "20 feet"; that is, he ought to read the 20-foot line at a distance away of 20 feet. If he gets a majority of the letters, we pass him on the test. If he fails to get a majority of the letters, we ask him to take the next line, which he should read at 30 feet. If he fails to get the majority of the letters in this line, try him successively with each line above until you find a line which he can read. We will say, for example, that he reads the line which is marked "40 feet"; that is, it is a line which he ought to read at a distance of 40 feet, but as a matter of fact, he is only standing 20 feet away. Therefore his vision is twenty-fortieths, or one-half what it ought to be. The distance which the child is standing away from the card represents the *numerator* of the visual fraction, and the line which he reads on the card represents the *denominator*. Children have a tendency to transpose letters, but this is of no consequence, and no attention should be paid to it. If they are very slow in reading the letters, it usually indicates some eye defect, even though they read them correctly.

I shall now test the eyes of the boy who said a few moments ago that he often sees the letters double. I find that he does not see all of the letters in the 20-foot line and complains that they look blurred. He reads the 30-foot line without any difficulty, which gives him a vision of about twenty-thirtieths.

I am now testing another child, who said that the letters run together. She reads the 30-foot line without any difficulty and a majority of the letters in the 20-foot line; apparently she only has a mild degree of eye defect.

The next child reads a majority of the letters in the 20-foot line, but fails on one or two, and says that they look slanting. Here again is apparently a rather mild degree of eye defect.

The next little girl did not respond originally, but nevertheless she has trouble. She can not read the last line. She fails to read both the 20-foot and 30-foot lines with the right eye, and testing her eyes with each line successively, I discover that the 100-foot line is the first she can read. This little girl's vision is then about twenty one-hundredths. The child says that the print looks all right to her when she is reading, but the teacher remarks that she always has to hold the book near her eyes. Of course she has a very high degree of eye defect, probably short-sight or myopia, and she ought to have glasses at the earliest possible moment, before the eyes deteriorate any more.

In testing the vision of the young child who has not yet learned to read, it is best to make use of the McCallie test. It consists of a series of cards, about 5 inches square, on which are printed a boy, a girl, and a bear. They are playing the game of ball, and the ball, which is represented by a small black dot, should be seen by the normal eye at a distance of 20 feet. By changing the cards frequently, it is easy to discover whether or not the child can really determine who has the ball. If he does not see the dot at a distance of 20 feet, then you gradually walk toward him until he succeeds in seeing it, and then you estimate from this about what his visual error is.

Teachers ought not only to observe and record defects of vision, but ought also to make notes of congested eyes, watery eyes, sties, and granulated lids. None of these conditions are normal, and all of them should receive attention. The serious eye disease known as trachoma is contagious and very difficult to cure. It is observed chiefly among children from the slums who have recently arrived

from the south of Europe. It is also rather common among the Indians and Japanese. It is difficult for any but an expert to recognize this disease.

Contagious diseases of the eye are in general indicated by (a) redness, (b) discharge, (c) sensitiveness to light, (d) granulations—ulcers.

A sudden redness of the eyes with more or less sensitiveness to light, particularly when accompanied by what appears to be a cold, should always cause the suspicion of measles.

I will show you now how easy it is to detect the children who are suffering from adenoids. I can go through any room and detect most of the adenoid children within two or three minutes after I have been in the room, in the majority of instances, and what I can do the teacher ought to be able to do easier and better, because she is perfectly familiar with the children. I shall select a boy whom I never have seen before, because he looks to me as if he had adenoids. Then we will test him to see if, as a matter of fact, he actually has. My first reason for selecting this boy is because he has a tendency to breathe with his mouth open. In making the examination I note at once that the lower teeth cut considerably inside the upper teeth, i. e., that the upper teeth are prominent, which is very often the case where a child has breathed through his mouth for one year or more. In other words, mouth breathing has a tendency to deform the jaws, so that the teeth in the upper jaw are either crooked or prominent, or both. Or, to put it another way, probably in 95 per cent of all the cases where one notes crooked and prominent teeth, mouth breathing has occurred; so that adenoids tend to produce more or less deformity of the bones of the face. Thumb sucking and the early loss of the first teeth also have a tendency to produce crooked teeth.

The first thing that I shall do in testing this child is to ask him to talk a little, because I want to discover the quality of his voice. The boy's voice is distinctly nasal in quality, and by giving these words which you have just heard him pronounce, "nine," "ninety-nine," "nine hundred and ninety-nine," you at once bring out this nasal quality of the voice. Now, there are in general only two reasons why a child has a nasal voice. One is that he has an acute cold, and the other is that he has an obstruction in his nose, usually due to adenoids. This boy has no cold; so reasoning from what I have said, he has adenoids. And you can be sure in practically every case that, barring a cold, a nasal voice in a school child means just one thing, and that is adenoids. If in addition to this you can discover that the child sleeps with his mouth open and has a tendency to snore, you may be quite sure that you have found a case of adenoids. I have just asked this boy if he snores in his sleep, and he says "Yes." His mother tells him that he does.

In reply to my question as to how his mouth feels when he wakes up in the morning, he says that his "mouth feels dry," and the reason is, of course, that he has breathed all night with his mouth wide open. Mouth breathing is never normal.

The next boy I have selected for examination says that he has had an operation on his nose and throat, and I note that the tonsils have been removed. Probably the adenoids were also removed, but in any event there is some adenoid tissue still present. The adenoid tissue may not have been completely removed or it may have returned, because it is not very infrequent for adenoids to come back a second, and sometimes even a third time. There is only one thing to do in these cases, and that is to have the operation repeated and all the tissue removed. This child's facial bones have been somewhat deformed by mouth breathing before his operation.

Teachers ought always to be suspicious of ear trouble where there are adenoids, because this tissue has a tendency to cause trouble with the ears. For

this reason I shall test this boy's hearing, to see whether his hearing is good. I suspect that he is somewhat deaf, because he has already asked me to repeat questions a number of times. To test the hearing, one of the best ways is to use the watch. You want to determine how far you can hear your own watch in a certain room. You can not state in advance how far a watch ought to be heard. Sometimes people say to me, "How far should a watch be heard?" Of course, it goes without saying that it depends upon the watch and upon the room in which you are giving the test. To determine this point, take your own watch in a given room and see how far you can hear it, making sure that your own hearing is good to begin with; then let this distance be used as the norm. I can hear my own watch in this room at arm's length, which is pretty close to $2\frac{1}{2}$ feet. In testing the hearing, always cover the child's eyes with one hand. This boy's hearing is reduced in his right ear a little more than one-half. In making the test be sure that the child is not drawing on his imagination; and, in order to determine this point, occasionally hold the watch behind you and ask the child if he hears it. The hearing in the left ear is about two-thirds normal. The boy says that he never had scarlet fever nor, as far as he knows, ever had any serious sickness. This is pretty good evidence that the defective hearing is not due to any acute infectious disease, as is sometimes the case, but that the decrease in hearing is due entirely to adenoids, and this is certainly an illustration of the fact that adenoids ought to be treated early. In a very large number of cases adenoids result in seriously defective hearing. Every child with adenoids ought to have his ears examined. Every child who has earache or running ears ought to be examined for adenoids. In other words, nearly all the ear trouble in children originates in the nose and throat. The trouble is not primarily in the ear, but in the nose and throat. Sometimes it is because the adenoid tissue which is situated behind the soft palate grows over the opening of the eustachian tube, which, as you know, leads down to the middle ear and ventilates it. Sometimes it is because there is a catarrh of the nose and throat, due either to adenoids or diseased tonsils, and the inflammation travels through the eustachian tube to the middle ear and sets up a similar inflammation there. So never forget that there is a very close and intimate relation between ear troubles and those of the nose and throat, and that most ear defects are avoidable.

If you ever have any reason to suspect that the answers of a child are incorrect when he is tested with the watch tick, it is a very easy matter to test him with the whispered voice. Place him at least 20 feet away, cover your own lips with a piece of paper so that he can not see the movement of your lips and then give him commands in a whisper. If he fails to execute the commands, you may be perfectly sure that he does not hear well, provided a normal child already tested at the same distance does execute the same commands when you use the same intensity of whisper. It is always a good procedure to use both the watch and the whispered-voice test. In the main it is safe to say that 8 per cent of the children in schools have adenoids, that 5 to 7 per cent of the children are deaf when tested with rough methods, and that nearly 15 per cent of them would be found to have defective hearing, if they were accurately tested by a physician. I want to repeat here that almost all of this trouble is due to neglected adenoids or diseased tonsils.

In testing the teeth of children, stand in a good light with your back toward the window and have the children form a line. Let them march past you, and as each child comes in front of you have him open his mouth just as wide as possible. Put one hand on the top of the head and the other on the chin, and the mouth will open wide. Note whether or not the child has any bad teeth, and if he has, make a record of it. It is a general impression among parents and

teachers that it is all right to ignore defective teeth in young children, i. e., the baby teeth, but, as a matter of fact, it is more important to get the first or deciduous teeth repaired than it is the permanent ones. So any decayed teeth, whether in a young child or in an older one, ought to receive prompt attention.

Having demonstrated these simple procedures in testing the eyes, ears, nose, and teeth, we shall now make a general health survey of the children by asking some questions.

How many children here have a good deal of headache? By that I mean as often as once a week or three times or every day. Eight children respond to this question and complain of more or less chronic headache. This is a smaller number than we usually discover. There are 85 children present, and out of that number we would expect to find 15 or 20 who suffer more or less from chronic headache.

How many children here have earache every once in a while? Now the number standing is just about what we would expect to find. We have 10 children standing, which is about the usual proportion.

How many of you children sometimes have running ears? Do you ever come to school with a piece of cotton in your ears? In this group there are no children who complain of running ears. Ordinarily we find about 4 per cent.

How many children often have toothache? Seventeen children complain of more or less toothache. It is well to remember that a sound tooth never aches, although it is also true that some decayed teeth do not ache. So you can be sure that every child who has aching teeth has unsound teeth, but you can not be sure that every child who does not complain of aching teeth has sound teeth.

How many children here have a toothbrush at home? Of the 85 present, 36 reply that they have.

How many use your toothbrush every day? Only 7 reply that they do. Unless a child uses his toothbrush regularly, you may be perfectly sure that he doesn't use it much, if any. It is one thing to have a toothbrush, but quite another thing to use it, and particularly to use it correctly.

How many of you have a toothbrush that is all your own that nobody else uses? The answer indicates that there are about 3 common toothbrushes. This is a smaller proportion than we usually find. We generally discover about 5 to 10 in every 100 children who use the family brush.

How many children always have the bedroom window open at night, even in cold weather? Of the 85 present, 65 do not have ventilated bedrooms when the weather is cold.

How many children have ever been to a dentist? Only 28 out of 85 have been to a dentist at some time. The rest apparently have never been at all.

How many of you children drink coffee? Sixty-eight reply that they do. The proportion is usually about 75 per cent.

How many of you always eat some fruit for breakfast? Of 85 present, 18 respond that they do. The remainder apparently do not, and yet fruit in some form is a most important article of diet for the child.

How many children here always have some meat or some eggs to eat for breakfast? About four-fifths of the children are standing. Usually we discover that over one-half of the children eat starchy breakfasts of a most inadequate nature.

At this point I should like to call your attention to the fact that we have in the schools a very considerable number of pupils in whom there is a great discrepancy between the physiological and chronological age. Under-developed children are often immature in mental as well as physical make-up, and for this reason they are prone to exhaustion and early neurasthenia when subjected to the same school strains as stronger and more mature children of the

same actual age. The physiologically immature child deserves careful attention on the part of teachers and parents, for they may, in many instances, save the child from serious consequences in later life. Please observe the group of pupils now standing before you. There are 7 children, all 11 years of age, but physiologically there are apparently great differences present. Between the largest and smallest child here there is a difference of over 40 pounds in weight and 8 inches in height, to say nothing of differences in muscular strength, lung capacity, general endurance, etc. These children are all expected to do exactly the same school work, but it is evident from the most superficial examination that some of them are relatively weak and immature. The smallest child in this group has, to my personal knowledge, a definite neurosis at this very moment.

Now, to make a rapid summary of what we have discovered here by a few very simple questions, we note that of 85 pupils, 16 apparently have definite defects of vision; 5 have chronic earache; none complain of running ears; 8 have chronic headache; 17 have frequent toothache; 57 have never been to a dentist; only 38 have toothbrushes of their own and of these but 7 use them every day; there are 3 common or family toothbrushes; 65 pupils have unventilated bedrooms in cold weather; 67 have no fruit for breakfast; about one-fifth have no proteid food for breakfast; and 68 drink coffee.

In addition to the points which have been brought out in this "school clinic" to-day, it is easy for the teacher to make observations in respect to the following conditions: Frequent sore throat, mal-nutrition, nervous disorders, deformities, defective postures, glandular enlargements in the neck, goiter, skin diseases, early contagious disorders.

(At this point the children were dismissed, and the rest of the talk was addressed to the teachers.)

This questionnaire not only brings out the existence of a very considerable number of physical handicaps, but aids you teachers very materially in discovering what sort of hygiene teaching is most needed with a given room of pupils, and I would recommend it to you particularly for this purpose. It is of no particular use to teach children about things which are not related to their daily lives, but by such a series of questions you can find out almost exactly what things they most need to know in respect to their personal health. If a child suffers from earache, or if several children suffer from earache, the rest of the group in the room will be interested and some teaching on the subject of earache will be effective. The same may be said of toothache, visual defects, and the other things which we have mentioned.

A word now about how to get a response from the parent after the teacher has discovered that physical defects are present. A blank notice ought to be used, such as is found in the survey which the Minnesota State Board of Health furnishes free to teachers. The notice reads as follows: "——— appears to the teacher to be in need of ——— attention. A further examination by your family physician, dentist, or specialist is advised." Now, you see that the notice simply says "appears to," and consequently does not definitely commit the teacher. This notice is signed by the principal of the school or by the superintendent. The teacher simply writes in whatever she thinks is wrong with the pupil. In the majority of instances you will find that the notice receives no attention whatever on the part of the parent, and this is one great difficulty that teachers complain about in respect to this health work that they are asked to carry on. Parents seem to be quite indifferent to the physical handicaps of their children. As a matter of fact, this is only an apparent indifference. The real difficulty is that the parent does not understand the significance of the conditions found in the child. A parent does not appreciate that adenoids have

serious consequences. He does not know that there is any relation between aching and discharging ears and adenoids, or between adenoids and crooked, prominent teeth and receding chin, or between adenoids and catarrh, or between enlarged, diseased tonsils and rheumatism, or between visual defects and headache and nervousness, and so on indefinitely. Now, what the parent really needs is some simple information along these lines. When once he receives such information, in almost every case he will cooperate. I have found this to be the case by long experience in work with school children. In order to give the parent the kind of instruction which he requires, I think the best plan is to send with the notice which the child takes home a little pamphlet which describes in very simple language what the defect is and what the consequences of such a defect are when neglected. When the parent really understands the situation, he will cooperate in almost every instance.

A few words now about the detection of mentally peculiar children, and especially of mentally defective children in the schools. It is of the greatest possible importance to discover whether a child is actually defective or merely dull, or perhaps a "misfit." A few years ago we had no exact way of discovering this point, but during the last three years use has been made in this country of what has been called the "Binet-Simon Intelligence Test" for measuring the intelligence of children who are suspected of being mentally defective. It is a psychological test and an extremely simple one, and there are nearly always a few teachers in a school system who soon become adepts in its use. It is so simple that any teacher at first thinks that she can use it. The difficulty is in the interpretation of the test. A certain aptitude is required, and an understanding of child nature, in order to use the test successfully. I should not recommend that the average teacher make use of it, but I think there are always a few teachers, as I said before, in every school system who can learn to employ the Binet test.

By means of this scale it is perfectly possible in the majority of cases to discover whether a child's mental age is actually equal to his chronological age or real age. A child may be 14 years old, for example, and have a mental age of only 6 years. A child may be 14 years old, as in the case of a little girl I recently examined, and yet when the test is applied, have a mental age of a normal child of 3 years. In this instance the 14-year old child had been in the first grade for five successive years.

[Eight retarded children were called into the room and arranged in a line, with a ninth standing in front of them. It was recommended that in each case the actual mental age ought to be determined by the Binet scale. These children gave their ages and grades as follows:

	Years.	Grade.
The first child.....	13	5th
The second	12	4th
Third	13	4th
Fourth	13	5th
Fifth.....	13	5th
Sixth.....	13	5th
Seventh	12	4th
Eighth	14	5th
Ninth	9	2d

A subsequent examination proved that only two of these children had a mental age equal to their actual age.]

In every school system it appears that the proportion of deficient or mentally fixed children is somewhere from 1 to 3 per cent, and is probably not far from $2\frac{1}{2}$ per cent. Every child who is retarded two years or more ought to be tested by the Binet-Simon Intelligence Scale to determine whether he is mentally defective or merely dull, for the treatment of these types of children must be essentially different. Dull children will not and can not receive a great deal of education, but their judgment is usually good. We should not try to educate these pupils too much. They will succeed fairly well in the world along lines not requiring superior intelligence. The mentally defective child, on the other hand, has defective judgment as well as defective intelligence. He does not profit by the ordinary plan of school education at all. Either the school must provide special lines of work for him, or else he must be sent to an institution for defectives. If his mental age is less than 8 years he probably never belongs in the public-school system, for he will never become independently self-supporting, but above this age he may in some cases.

I should like to recommend that all of you teachers become familiar with certain recent books on the subject of the physical and mental observation of school children, and for this purpose I will mention a few of them: Allen's "Civics and Health"; Ginn & Co. Hoag's "Health Index of Children"; Whitaker & Ray-Wiggin Co. Hoag's "Outline for the Health Grading of the School Child." Hoag and Terman's "Health Work in Schools"; Houghton-Mifflin Co. Cornell's "Medical Inspection of School Children"; F. A. Davis Co. Gulick and Ayres' "Medical Inspection of Schools"; Charities Publication Committee. Holmes's "Conservation of the Child"; J. B. Lippincott Co. Huey's "Syllabus for the Clinical Examination of Children" (The Binet Test); Warwick & York.

A summary of clinics held at 15 cities.¹

	Adrian.	Luverne.	Dawson.	Winthrop.	Madison.	Benson.	Willmar.	Morris.	Montevideo.	Redwood Falls.	Granite Falls.	Pipestone.	Albert Lea.	Windom.	Wabasha.
Date.....	5/7	5/7	4/23	4/20	4/24	4/11	4/8	4/8	4/16	4/22	4/18	5/6	5/13	5/1	4/29
Grades.....	3-8	3-5	3-5	2-5	2-5	4-5.7	3-5	4-5	3-4	4-5	3-5	4-6	3-5	3-5	3-5
Number present.....	95	44	107	87	119	113	91	22	65	89	95	114	85	94	52
No ventilation in bedroom...	20	26	.....	57	.....	40	35	8	.....	5	39	8	85	31	31
Own toothbrush.....	85	39	70	82	65	104	76	21	57	80	84	102	36	94	38
Daily use of toothbrush.....	14	10	7	14	14	8	11	1	22	40	19	22	7	37	18
Use of common toothbrush.....	.....	4	13	10	.....	15	.....	.....	.....	.....	2	8	3	12	3
Never been to a dentist.....	.....	19	58	.....	.....	.....	.....	6	.....	.....	.....	48	57	.....	26
Frequent toothache.....	20	9	28	41	30	37	32	14	17	20	28	30	17	.....	14
Frequent headache.....	11	13	43	37	25	.....	9	5	13	.....	26	28	8	25	13
Blurred vision.....	6	16	35	19	.....	25	20	11	7	20	16	37	16	17	12
Frequent earache.....	8	6	21	13	17	11	8	2	16	12	13	19	5	7	14
Running ear.....	3	1	4	4	9	2	1	1	3	4	4	7	0	4	3
Frequent sore throat.....	9	.....	.....	5	.....	.....	.....	.....	6	.....	.....	36	.....	.....	.....
Adenoids.....	5	6	4	6	9	7	4	2	3	4	6	.....	7	.....	.....
Diseased tonsils.....	.....	3	.....	.....	3	.....	.....	.....	4	.....	.....	.....	5	.....	.....
No form of proteid for breakfast.....	30	19	.....	.....	.....	.....	.....	.....	16	.....	.....	32	17	46	20
No fruit for breakfast.....	51	40	.....	.....	.....	104	.....	.....	50	.....	54	95	67	91	41
Daily use of coffee.....	58	25	83	96	98	.....	71	15	33	40	54	82	68	.....	40

¹ Blank spaces indicate that the question was not asked or examination was not made.

Table indicating sanitary conditions of Minnesota graded schools.

+ indicates satisfactory condition; + - indicates fairly satisfactory condition; - indicates unsatisfactory condition.

Cities and towns.	Heating system.	Ventilation.	Lighting.	Drinking fountains.	Common drinking cup abolished.	Paper towels.	Roller towels abolished.	Temperature.	Air humidification.	Adjustable desks.	Health supervision.	Cleaning methods.	Toilet ventilation.
Alexandria.....	+	+	+	+	+	+	+	68-70	-	+-	-	+	+-
Albert Lea.....	++	++	++	++	++	++	++	68	+	+-	-	+	++
Austin.....	++	+	++	++	++	+	+	68-70	-	+-	-	++	++
Adrian.....	+-	+	+	++	++	++	++	72	-	-	-	++	+
Benson.....	+	+	+-	++	++	++	++	68	-	-	-	+	++
Biwabik.....	+	+	+	++	++	++	++	67-70	+	+-	+	++	+
Brainerd.....	+	+-	-	+-	++	+	+	70	-	-	+-	+	+-
Cannon Falls.....	+	+	+	+	++	-	-	68-70	-	+-	+-	++	+
Chatfield.....	+	+-	+-	+	++	-	-	70	-	-	+-	++	+
Chisholm.....	+	+	+	++	++	+	+	65-68	+	+	+	++	+
Cloquet.....	+-	++	+	++	++	+-	+-	68-70	-	-	+	++	+-
Crookston.....	+	+	+-	++	++	+	+	67	-	-	+-	++	+
Dawson.....	+	+-	+	++	++	-	-	66-68	-	-	-	-	-
Ely.....	+-	+-	+	+-	++	+	+	68-70	-	+-	+	++	++
Eveleth.....	+	+	+	++	++	+	+	68	+	+	+	++	+
Fairmont.....	+-	+	+-	++	++	-	-	70	+	+-	-	++	+
Faribault.....	+-	-	+-	+-	+	+	+	65-72	-	-	+	++	-
Farington.....	-	-	-	-	-	+	+	50-80	-	-	-	++	-
Fergus Falls.....	+	-	+-	+	++	+	+	68-70	-	+-	+	++	+
Glencoe.....	+-	+-	+	++	++	-	+	68-71	-	+-	+	++	-
Grand Rapids.....	+	+	+	++	++	+	+	70	-	+-	+	++	+
Granite Falls.....	+-	-	+-	++	++	-	-	70	-	-	-	++	-
Hallock.....	+	+	+	++	++	-	-	70	+	+-	+-	++	+
Hibbing.....	+	+	+	++	++	+	+	70	+	+	+	++	+
Lanesboro.....	+	+	+	++	++	+	+	65-72	+-	-	+-	++	-
Litchfield.....	+	+	+	++	++	+	+	68	-	+-	+-	++	+
Luverne.....	+-	+	+	++	++	+	+	70	-	-	-	++	+-
Madison.....	+	+	+	++	++	-	-	70	-	-	+-	++	+
Mankato.....	+	+	+	++	++	-	+	68-70	+-	+-	+-	++	+
Montevideo.....	+	+-	+-	++	++	-	-	68	+	-	+	++	+
Moorhead.....	-	-	+-	-	++	+	+	+-	-	-	+-	-	+-
Morris.....	+-	-	+	-	-	+	+	68-70	-	-	+-	++	+
New Ulm.....	+-	+	+	+	++	+-	+	68-70	-	-	+-	++	+-
Pipestone.....	+-	+-	+-	+-	++	-	-	70	-	-	-	++	+-
Red Wing.....	+-	+-	+-	+	++	+	+	68	-	-	+-	++	+
Redwood Falls.....	+	+	+-	+	++	-	-	68-70	-	-	+-	++	+
Renville.....	+-	+-	+-	++	++	+	-	65-70	-	+-	+-	++	+
Rochester.....	+	+	+	++	++	+	+	68	-	-	+	++	+
Rushford.....	+	+	+	++	++	+	-	65-70	+	-	+-	++	+
St. Cloud.....	+-	-	+	-	++	+	+	72	-	+-	+-	++	+-
St. James.....	+-	-	+-	+	++	-	-	68-70	-	-	+-	++	-
St. Peter.....	+-	+-	+-	+-	+-	+	+	68-70	-	-	+-	++	+
Sauk Center.....	+-	+-	+	++	++	-	-	68-70	+	+	+-	++	+
Slayton.....	+-	+-	+	++	++	+	+	65-70	-	-	+-	++	+
Spring Valley.....	+-	+-	+	++	++	-	-	68-72	-	-	+-	++	+
Stillwater.....	+	+	+	++	++	-	-	70	-	+	-	++	+
Two Harbors.....	+	+	+	++	++	-	-	70	+	+-	-	++	+
Virginia.....	+	+	+	++	++	+	+	68-70	+	+	+	++	+
Wabasha.....	+-	-	-	-	++	-	+	70	-	-	-	++	-
Waseca.....	+	+	+	++	++	+	+	70	+-	+-	-	++	+
Wadena.....	+	+	+	++	++	+	+	68-70	-	-	-	++	+
Willmar.....	+	+-	+-	+-	++	+	+	50-80	+-	-	+-	++	+
Windom.....	+	+	+	++	++	-	-	70	-	+	+	-	+-
Winona.....	+	+-	+-	++	++	+	+	68-70	+-	+-	+-	++	+-
Winthrop.....	+	+-	+	++	++	+	+	68-72	+	+-	-	++	-
Worthington.....	+-	+-	+	+	+	-	-	70	-	-	+-	+	+

BIBLIOGRAPHY.

[Publications marked with an asterisk (*) deal principally with the Binet test and other intelligence tests of children. Literature on the Binet test and apparatus for carrying out tests may be obtained from Messrs. C. H. Stoalting & Co., North Green Street, Chicago. For a complete bibliography on the Binet test write to Prof. L. M. Terman, P. O. address: Stanford University, California]

SCHOOL HYGIENE.

- Brown. Health in home and town. Boston, D. C. Heath & co.
Conn series. New York, Silver-Burdett co.
Crampton. Hygiene of the worker. New York [etc.] American book co.
Davison series. New York [etc.] American book co.
Gulick series. Boston, Ginn & co.
Hall. New century series. New York [etc.] American book co.
Hoag, Ernest B. Health studies. Boston, D. C. Heath & co.
Ritchie series. World book co.
Woods-Hutchinson series. Boston, Houghton Mifflin co.

SEX HYGIENE.

- Lowry series. Chicago, Forbes & co.
Smith, Nellie M. "The three gifts of life." New York, Dodd, Mead & co., 1913. xiv, 138 p. F°.
Winfield Scott Hall series. Wynnewood publishing co.

CHILD HYGIENE, SCHOOL SANITATION, AND MEDICAL INSPECTION OF SCHOOLS.

- Allen, William H. Civics and health. Boston [etc.] Ginn & co. [° 1909] xi, 441 p. illus. 8°.
Bryant, Louise S. School feeding: its history and practice at home and abroad. Philadelphia, J. B. Lippincott co., 1913. 310 p. illus. 12°.
Chapin, Charles V. Sources and modes of infection. New York, John Wiley & sons, 1910. ix, 399 p. 8°.
Cornell, Walter S. Health and medical inspection of school children . . . Philadelphia, F. A. Davis co., 1912. xiv, 614 p. illus. 8°.
Dennison, ——. Helping school children. New York, Macmillan & co.
Forsyth, David. Children in health and disease; a study of child-life . . . London, J. Murray, 1909. xix, 362 p. 8°.
Gulick, Luther H., and Ayres, Leonard P. Medical inspection of schools. New York, Survey associates, inc., 1913. xx, 224 p. illus., plates. 8°. (Russell Sage foundation [Publications])
Guthrie, Leonard G. Functional nervous disorders in childhood. Oxford, Oxford university press, 1913.
Hoag, Ernest B. A state campaign for school hygiene. St. Paul, Minnesota state board of health.
——— The health index of children . . . San Francisco, Whitaker & Ray-Wiggin co., 1910. 13-188 p. illus. 12°.
Bibliography: p. 186-88.

- Hoag, Ernest B. The health survey of the school child. San Francisco, Whitaker & Ray-Wiggin co.
- A sanitary survey for schools. San Francisco, Whitaker & Ray-Wiggin co.
See also Health pamphlets (especially for parents), by same author. Published by Whitaker [etc.]
- and Terman, Lewis M. Health work in schools. Boston, Houghton Mifflin co. (*In preparation*)
- Holmes, Arthur. The conservation of the child . . . Philadelphia and London, J. B. Lippincott co., 1912. 3-345 p. illus., plates. 12°. (Lippincott's educational series, vol. x)
- * Huey, Edmund B. Backward and feeble-minded children . . . Baltimore, Warwick and York, inc., 1912. 221 p. 8°. (Educational psychology monographs)
- Kuhlmann, —. Monograph on the Binet test. Faribault, Minn, State school for the feeble-minded.
- Marshall, John S. Mouth hygiene and mouth sepsis. Philadelphia, J. B. Lippincott co., 1913. 262 p. illus. 12°.
- Terman, Lewis M. The teachers' health; a study in the hygiene of an occupation. Boston [etc.] Houghton Mifflin co. [°1913] xiii, 136 p. 12°. (Riverside educational monographs, ed. by H. Suzzalo)

Periodicals.

- Child. Published monthly. Kelynack, London; G. E. Stechert & co., New York city.
- Psychological clinic. Published monthly. University of Pennsylvania, Philadelphia.
- School hygiene. Published quarterly. Stechert & co., New York city.
- Survey. Published weekly. Survey associates, inc., 105 East 22d Street, New York city.

PREVENTIVE DENTISTRY.

- Corley, J. P. Oral hygiene. Inauguration of the present movement. Dental cosmos, 52:1117-20, October 1910.
- Gallie, D. M. The time, the place, and the work. Dental review, 25:563-74, June 1911.
- McCreary, J. P. Dental inspection of public school children . . . South Carolina medical association. Journal, 6:457-61, September 1910.
- National dental association—Southern branch. Report of committee on oral hygiene. Dental cosmos, 52:1103-05, October 1910.
- United States. Bureau of Education. Annotated bibliography of medical inspection and health supervision of school children in the United States for the years 1909-1912. Washington, Government printing office, 1913. p. 41-49. 8°. (Bulletin, 1913, no. 16)

EUGENICS.

- Coulter, John M., *et al.* Heredity and eugenics . . . Chicago, University of Chicago press [1912] vii, 315 p. illus., plates, diagrs. 8°.
- Davenport, Charles B. Heredity in relation to eugenics. New York, Holt and co., 1911. iii-xi, 298 p. illus. 8°.
Bibliography: p. 273-87.

Eugenics record office. Publications (especially those with *): *No. 1. Heredity of feeble-mindedness—H. H. Goddard. No. 2. (Out of print). No. 3. Preliminary report of a study of heredity in insanity in the light of the Mendelian laws—Cannon, Rosanoff, etc. *No. 4. A first study of inheritance in epilepsy—Davenport, Weeks. No. 5. A study of heredity of insanity in the light of the Mendelian theory—Rosanoff, Orr. No. 6. The trait book—Davenport. No. 7. The family-history book—Davenport, etc. No. 8. Some problems in the study of heredity in mental diseases—Cotton.

Eugenics review. Published quarterly. Eugenics educational society, 6 York bldg., Adelphi, London.

Goddard, Henry H. The Kallikak family; a study in the heredity of feeble-mindedness. New York, Macmillan co., 1912. xv, 121 p. front., plates, ports. 8°.

Punnett, Reginald C. Mendelism. 3d ed. entirely rewritten and enl. New York, Macmillan co., 1911. xiv, 192 p. illus. 12°.

BINET AND OTHER METHODS FOR TESTING THE INTELLIGENCE OF SCHOOL CHILDREN.

Holmes, Arthur. The conservation of the child . . . Philadelphia and London, J. B. Lippincott co., 1912. 345 p. illus., plates. 12°. (Lippincott's educational series . . . vol. 10)

Contains a brief chronological bibliography on mentally defective children. p. 343-45.

Huey, Edmund B. Backward and feeble-minded children; clinical studies in the psychology of defectives, with a syllabus for the clinical examination and testing of children. Baltimore, Warwick and York, inc., 1912. ix-xii, 221 p. 8°. (Educational psychology monographs)

Bibliography: p. 209-13.

Kuhlmann, —. Monograph on the Binet test. Faribault, Minn., School for feeble-minded.

MacDonald, Arthur. Bibliography of exceptional children and their education. Washington, Government printing office, 1913. 46 p. 8°. (U. S. Bureau of education. Bulletin, 1912, no. 32)

Tredgold, A. F. Mental deficiency (amentia) London, Baillière and Cox, 1908. xviii, 391 p. illus. 8°.

Whipple, Guy M. Manual of mental and physical tests . . . Baltimore, Warwick & York, inc., 1910. xix, 534 p. illus. 8°.

Periodicals.

Journal of psycho-asthenics. Published quarterly. Faribault, Minn.

Pedagogical seminary. Published quarterly. F. Chandler, Worcester, Mass.

Psychological clinic. Published monthly. Psychological clinic press, Philadelphia.

Training school. Published monthly, except July and August. Vineland, N. J.
Organ of the Training school for backward and feeble-minded children, Vineland, N. J.

SCHOOL NURSE.

[Only the most important references are given here. A complete bibliography will be found in the Ninth yearbook of the National society for the study of education. 1911. p. 72]

Ayres, Leonard P. The school nurse. In his Open-air schools. Garden City, N. Y., Doubleday, Page & co., 1910. 8°.

- Cornell, Walter S. The school nurse. *In his* Health and medical inspection of school children. Philadelphia, F. A. Davis co., 1912. p. 76-89. 8°.
- Crowley, Ralph H. The school nurse. *In his* The hygiene of school life. London, Methuen & co. [1910] p. 181-83. 8°.
- Forbes, Duncan. The school nurse. *In* Kelynack, T. N., *ed.* Medical examination of schools. London, P. S. King and son, 1910. p. 264-74. 8°.
- Gulick, Luther H., and Ayres, Leonard P. The school nurse. *In their* Medical inspection of schools. [4th ed. rev.] New York, Survey associates, inc., 1913. Chapter 17, p. 264-74. Russell Sage foundation.)
- Hogarth, A. H. The school nurse. *In his* Medical inspection of schools. London, H. Frowde [etc.] 1909. p. 172-86. 8°.
- Newmayer, S. W. Evidence that the school nurse pays. *In* American school hygiene association. Proceedings, 1911. American physical education review, 1911, p. 44-51, tables.
- Nutting, M. Adelaide. Educational status of nursing. Washington, Government printing office, 1912. 97 p. 8°. (U. S. Bureau of education. Bulletin, 1912, no. 7)
- Leipoldt, C. L. The school nurse; her duties and responsibilities. London, The Scientific press, ltd., 1912. ix, 197 p. plan, diags. 12°.

RURAL TEACHERS.

- *Allen, William H. Civics and health. Boston [etc.], Ginn & co. [*1909] xi, 441 p. illus. 8°.
- Cabot, ———. The health of school children. Boston, Houghton Mifflin co.
- *Dennison, ———, Helping school children. New York, Macmillan.
- *Dresslar, Fletcher B. School hygiene. New York, The Macmillan co., 1913. xi, 369 p. illus., plates. 8°. (Brief course series in education, ed. by P. Monroe)
- *Hoag, Ernest B. The health grading of the school child. San Francisco, Whitaker [etc.] 1910.
- The health index of children. . . . San Francisco, Whitaker & Ray-Wiggin co., 1910. 13-118 p. illus. 12°.
- Health pamphlets for parents. San Francisco, Whitaker [etc.]
- and Terman, Lewis M. Health work in schools. Boston, Houghton Mifflin co. (*In preparation*)
- Holmes, Arthur. The conservation of the child. . . . Philadelphia and London, J. B. Lippincott co., 1912. 3-345 p. illus., plates. 12°. (Lippincott's educational series . . . vol. x)
- *Terman, Lewis M. The hygiene of childhood. Boston, Houghton Mifflin co.

APPENDIX.

BLANKS AND FORMS FOR RECORDS, PARENTS' NOTICES, ETC.

PHYSICAL RECORD.

HEALTH RECORD OF

SEX: M.-F. BORN:

School year.....	1		2		3		4		5		6		7		8		9	
Examination and results.	E	R	E	R	E	R	E	R	E	R	E	R	E	R	E	R	E	R
Dates																		
General appearance																		
Nutrition																		
Nervous disorder																		
Eyes																		
Ears																		
Nose																		
Throat																		
Teeth																		
Skin																		
Heart																		
Lungs																		
Neck glands																		
Vaccination																		
Visits of nurse																		
Reply to notice																		

NOTE:

(OVER)

†—Normal. C.—Corrected. E.—Examination.
 —. —Not normal. N.—Not corrected. R.—Result.
 P. C.—Partially corrected.

[REVERSE.]

REMARKS:

This child has had the following diseases at the age indicated below:

Chicken pox when.....	years old.	Whooping cough when.....	years old.
Diphtheria	"	Pneumonia	"
Measles	"	Typhoid	"
Tonsilitis	"	Smallpox	"
Mumps	"	Tuberculosis	"
Scarlet fever	"	Infantile paralysis	"

Date_____

Notice to parents or guardians:

_____appears to
 the teacher to be in need of_____

_____attention. A further examination
 by your family physician, dentist, or specialist, is advised.

Principal.

School.

The parent will please sign here and
 return the notice to the principal.

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ORGANIZED HEALTH WORK IN SCHOOLS

WITH AN ACCOUNT OF A CAMPAIGN FOR SCHOOL HYGIENE
IN MINNESOTA

BY

ERNEST BRYANT HOAG, M. D.

Director of School Hygiene for the Minnesota State
Board of Health



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- No. 2. Mathematics at West Point and Annapolis.
- No. 3. Report of committee on uniform records and reports.
- No. 4. Mathematics in technical secondary schools.
- *No. 5. A study of expenses of city school systems. Harlan Updegraff. 10 cts.
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- *No. 11. Current educational topics, No. I. 5 cts.
- *No. 12. Dutch schools of New Netherland. W. H. Kilpatrick. 20 cts.
- *No. 13. Influences tending to improve work of teacher of mathematics. 5 cts.
- No. 14. Report of the American commissioners on the teaching of mathematics.
- *No. 15. Current educational topics, No. II. 10 cts.
- *No. 16. The reorganized school playground. Henry S. Curtis. 5 cts.
- *No. 17. The Montessori system of education. Anna Tolman Smith. 5 cts.
- *No. 18. Teaching language through agriculture, etc. M. A. Leiper. 5 cts.
- *No. 19. Professional distribution of college graduates. B. B. Burritt. 10 cts.
- *No. 20. Readjustment of a rural high school. H. A. Brown. 10 cts.
- No. 21. Urban and rural common-school statistics. Updegraff and Hood.
- No. 22. Public and private high schools.
- No. 23. Special collections in libraries. Johnston and Mudge.
- No. 24. Current educational topics, No. III.
- No. 25. List of publications of the United States Bureau of Education, 1912.
- *No. 26. Bibliography of child study for the years 1910-1911. 10 cts.
- No. 27. History of public-school education in Arkansas. Stephen B. Weeks.
- No. 28. Cultivating school grounds in Wake County, N. C. Zebulon Judd.
- No. 29. Bibliography of teaching of mathematics. D. E. Smith and C. Goldziher.
- No. 30. Latin-American universities and special schools. E. E. Brandon.
- No. 31. Educational directory, 1912.
- No. 32. Bibliography of exceptional children. A. MacDonald.
- *No. 33. Statistics of State universities, etc., 1912. 5 cts.

(Continued on p. 3 of cover.)

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